MME Form 9
Rev. Mar. 59

UNITED STATES
DEPARTMENT OF THE INTERIOR
Office of Minerals Exploration

OFFICIAL DOCKET FILE

Contract No. 14-23-090-2003 Docket No. MME- 6015

Application
- [ ] Denied
- [ ] Withdrawn

Contract
- [ ] Terminated - Not Certified
- [ ] Terminated - Certified
- [ ] Cancelled
- [ ] Royalty Agreement

The records contained in this file are marked (x) and arranged in this order:

Folder No. 1:

Left Side

- [ ] Royalty Audits
- [ ] Certification of Discovery
- [x] Closing Letter
- [x] Cost Audits 1/13/60
- [x] Termination Notice ~~or Agreement~~ as of Sept. '59
- [ ] Recision Notice
- [ ] Assignment of Contract
- [x] Contract Amendments
- [x] Contract with all exhibits and annexes - 6-16-59
- [x] Owner's Consent to Lien and Subordination Agreement
- [x] Application and Attachments

Right Side

- [ ] Project Summary (final)
- [x] Work Completed Analysis (final)

All other material filed in chronological order including the following reports if checked:

- [ ] Field Team Semiannual Report for Certified Project
- [ ] Final Field Team Report (Tab)
- [ ] Operator's Final Report (Tab)
- [ ] Interim Field Team Reports
- [ ] Operator's monthly reports and all attachments
- [x] On-site Exam. Report (Tab) 5-18-59
- [ ] Settlement Sheets
- [ ] Drill Logs

Additional Folders:

Left Side

Folders No._____: Reports
- [ ] Analysis of Semiannual Inspection Reports
- [ ] Project Summary (Interim) by MME Engineers

Right Side

- [ ] Field Team Semiannual Report for Certified Project
- [ ] Field Team Interim Reports
- [ ] Operator's Monthly Reports with Transmittal, Narrative and Maps

Folders No. 2 : Maps (Use pocket folder or envelope)

Folders No._____: Settlement Sheets

Folders No._____: Drill Logs

Folders No._____: Royalty Material

52615

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
2/18	alt	500
	Burrow	500
2/19	Jaffrey	800
2/19	Selfridge	120
		110
2-19	gad	225

FEB 19 1960

Mr. Glen Larsen

Eureka, Utah

Re: Docket No. OME-6015 (Lead-Copper)
Glen Larsen
Iron Blossom Mine
Juab County, Utah
Contract No. 2003

Dear Mr. Larsen:

Reference is made to your terminated exploration contract with the Government.

We sincerely regret that the work performed did not result in a certification of possible production under the provisions of the contract. In the absence of such certification, the Government retains no claim or lien against the property subject to the contract or any future production therefrom. We, therefore, are closing our books and records on this contract. Your attention, however, is called to the provisions of the contract which require the operator to keep and preserve certain records for the periods indicated.

We appreciate your interest and participation in the OME exploration program.

Sincerely yours,

(signed) FRANK E. JOHNSON

Acting Director

Copy to:
Mr. H. E. Raddatz, President
Tintic Standard Mining Company
1114 Walker Bank Building
Salt Lake City 11, Utah

GLAult/a 2-18-60
cc to: Director's Reading File
Operating Committee
CA&A Division
OME Field Team, Region III (2)
H. M. Callaway, USBM
Harold Kirkemo, USGS
Docket
Chron

43683

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
2/18	[illegible]	500
	[illegible]	500
2/19	[illegible]	800
2/19	[illegible]	190
		110
		225

FEB 19 1960

Mr. H. E. Raddatz, President
Tintic Standard Mining Company
1114 Walker Bank Building
Salt Lake City 11, Utah

Re: Docket No. OME-6015 (Lead-Copper)
Glen Larsen
Iron Blossom Mine
Juab County, Utah
Contract No. 2003

Dear Mr. Raddatz:

Enclosed is a copy of a self-explanatory letter of today to the Operator under the above-cited contract.

This correspondence relates to the Lien and Subordination Agreements signed by you on February 20, 1959, under the OME program.

Sincerely yours,

(signed) FRANK E. JOHNSON

Acting Director

Enclosure

GLAult/a 2-18-60
cc to: Director's Reading File
Operating Committee
OME Field Team, Region III (2)
Code 500
Docket
Chron

43683

OFFICE OF MINERALS EXPLORATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REPORT OF REVIEW

I have reviewed the Monthly Reports of:

Glen Larsen, an individual
Eureka, Utah

pertaining to Exploration Project Contract No. 14-23-090-2003, OME No. 6015, including Amendment No. 1, for July 1959 to September 1959, inclusive, covering a lead-copper project on the Iron Blossom Mine Property, Juab County, Utah.

My review included an examination of the Monthly Reports (Forms MF-104) and supporting documents, comparison of the claimed costs with the contract and pertinent schedules, verification of work performed by reference to Field Team reports and correspondence, and a determination of the reasonableness and propriety of the costs.

This review was made in lieu of a final audit of the Operator's accounts and records for the reason that:

> All of the acceptable costs were under a contract provision for contribution by the Government on the basis of fixed unit costs of work performed.

The findings of this review are stated in the following summary:

Total cost billed by Operator		$14,332.50
Exceptions:		
Prior to this review	$15.00	
Herewith	-0-	15.00
Total acceptable cost		$14,317.50

The contract calls for a 50 percent contribution of the allowable costs by the Government. Therefore, if the project is otherwise accepted as having met the terms of the contract, payments as follows are valid and proper:

Payable on audited claim	$7,158.75
Paid to date	6,858.75
Balance due Operator	$ 300.00

Rd. to Oper. 1/20/60

E. H. Talbert
E. H. Talbert, OME Auditor

January 15, 1960

OFFICIAL FILE COPY O. M. E. RECEIVED JAN 15 1960		
DATE	INITIALS	CODE
1-15	gad	VVO
1/15	[illegible]	800
1/18	alt	500

Building 20 - Federal Center
Denver 25, Colorado
January 12, 1960

CERTIFIED MAIL

Mr. Glen Larsen
Eureka
Utah

Re: Docket No. OME 6015 (Lead-Copper)
Contract No. 2003
Glen Larsen, (Iron Mosesca mine)
Juab County, Utah

Dear Mr. Larsen:

In reference to the letter to you from this office dated December 31, 1959, it has been decided that it will not be necessary to prepare and execute a formal agreement in order to terminate the contract in its present status.

The results of the work completed under Stage I indicate that work under Stage II is not warranted. Since Government approval for additional work under the contract will not be forthcoming, the contract is to be considered terminated upon completion of the Stage I work which was reported by you on Form MF-104, Operator's Monthly Report and Voucher, for the month of September 1959.

The account will be placed in line for review of reported costs by the Contract Administration and Audit Division, OME. When the Report of Review is released to this office, we will then be in a position to make final payment of monies withheld in processing the accounting report for the month of September 1959.

Very truly yours,

OME Field Team, Region III

JWT:ltm

Original signed by

By _____
J. W. Townsend
Executive Officer

cc: Chmn. Op. Comm. (2)
Finance Off. Reg. III
Amendment file, Reg. III
Hasler
Corres. file
Susp.
Chron.

Government's copy

OFFICIAL FILE COPY
O. M. E.
RECEIVED AUG 7 1959

DATE	INITIALS	CODE
8-7	gad	VVO
		VOO

Signed by Selfridge Kluegelheft Talbut

EXPLORATION CONTRACT
GLEN LARSEN
DOCKET NO. OME-6015

AMENDMENT NO. 1

It is agreed this 14th day of July, 1959, between the United States of America, acting through the Department of the Interior, Office of Minerals Exploration, hereinafter called the "Government," and Glen Larsen, hereinafter called the "Operator," that Exploration Contract No. 2003 (Docket No. OME-6015), dated June 16, 1959, is amended as follows:

In Exhibit "A", Description of the Work, add a paragraph 5 to read as follows:

All significantly mineralized areas encountered in the drifting and crosscutting shall be sampled normal to their trends at linear intervals of not greater than ten feet. All samples shall be split and one-half thereof assayed for lead, copper, zinc, silver, and gold. The remaining half of all samples shall be furnished to the Government upon request. Sample locations and assay results shall be accurately shown on the monthly progress maps submitted to the Government.

This amendment shall not be construed to increase the estimated total cost of the project, the aggregate total amount which the Government may be required to contribute, or the fixed unit cost of any item of work.

Executed in quintuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By Frank E. Johnson
Acting Director, Office of
Minerals Exploration

GLEN LARSEN
Glen Larsen

Government's copy

MME Form 51
Feb. 1959

JUN 29 1959 O.M.E.

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

EXPLORATION CONTRACT
(Short Form)

Docket No.	Commodity	Contract No.	County	State
OME -6015	lead-copper	14-23-090- 2003	Juab	Utah

It is agreed 16 JUN 1959 (Date), between the United States of America, acting through the Department of the Interior, Office of Minerals Exploration, hereinafter called the "Government," and

Glen Larsen, an individual

whose mailing address is Eureka, Utah, hereinafter called the "Operator," as follows:

ARTICLE I. Authority and scope.--(a) This contract, entered into under the authority of Public Law 701, 85th Cong., 2d sess. (72 Stat. 700; 30 U.S.C. § 641 - 646), consists of this form, the attached Annex I (land description), Exhibit A (work and costs), and the maps and documents listed. The work is a search for new or unexplored deposits of the commodity designated above. The Operator shall begin the work on or before August 1, 1959 (Date), and, subject to the provisions of Article 7 and Exhibit A, shall complete the work within 14 months from the date of the contract.

(b) The description of the work and the fixed cost for each unit of work to be performed (per foot of drilling, per foot of drifting, per hour of operations, etc.) are hereby agreed upon as specified in Exhibit A. The estimated total cost of the work is $43,926.00 The Government will contribute 50 percent of the total fixed unit costs of the work performed, not in excess of $ 21,963.00 in accordance with the provisions of Articles 4 and 5.

(c) Interest computation.--Simple interest computed annually at the rate of 6-3/8 percent shall accrue from the dates Federal funds are made available until the period specified for payment of royalty expires, or until the amount of Federal funds contributed is fully repaid with interest.

(d) The Operator shall not transfer or assign this contract or any right or obligation thereunder without the written consent of the Government.

ARTICLE 2. Operator's rights in land.--(a) The Operator represents and undertakes that Annex I correctly describes the land which is the subject of this contract and the nature of the Operator's right of property and possession therein (whether as owner, lessee, or otherwise), and that such right, title, or interest is subject only to the following claims, liens, or encumbrances:

Interest of Lessor

(b) The Subordination Agreement of the holder of any claim, lien, or encumbrance listed above and (if the Operator does not hold the legal title) the Lien Agreement of any holder of the legal title of the land (lessor, seller, optionor, etc.) are attached as follows:

Lien and Subordination Agreement of Tintic Standard Mining Company.

(c) The Operator shall preserve and maintain his right, title, or interest in the land and his right to the possession thereof for the purposes of this contract, and shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of this contract. The Operator shall neither transfer, convey, nor surrender the land nor any right, title, or interest therein, nor permit nor suffer any claim, lien, or encumbrance thereon, without expressly referring to and providing in the instrument of conveyance, lien, or encumbrance for the preservation of the Government's right to a royalty on production and liens for the payment thereof. Two true copies of such instrument shall be furnished to the Government. If the Government's rights to royalty as provided in Article 6 have been terminated, the provisions of this paragraph (c) shall become inapplicable.

ARTICLE 3. Performance of the work.--(a) Operator's responsibility.--The work shall be performed diligently, efficiently, in a workmanlike manner in accordance with good mining standards, and in compliance with State laws governing health, safety, and liability insurance covering employment. The Operator shall provide suitable and adequate equipment, facilities, materials, supplies, and labor to complete the work as specified in Article 1(a).

(b) Government may inspect.--The Operator shall consult with and inform the Government on all phases of the work as it progresses. The Government may enter at all reasonable times to inspect the work under the contract and production operations during the period that royalty is payable to the Government. The Operator shall provide the Government with all reasonable means of access for such inspections.

ARTICLE 4. Contribution by the Government.--The Government will make its contribution on the basis of the monthly vouchers referred to in Article 5(b), but all payments by the Government are provisional only, subject to audit. Until the account between the Operator and the Government is finally audited and settled and the Operator's final report has been received, the Government may withhold such sums as are necessary to protect its interests. To the extent that amounts in excess of fixed unit costs or in excess of the estimated total cost may be necessary for the performance of the work, the Operator shall incur and pay such amounts for his own account without contribution by the Government. The Government will not contribute to the cost of any work performed prior to the date of this contract. The Government may make payments for the account of the Operator directly to independent contractors and suppliers rather than to the Operator.

ARTICLE 5. Reports, accounts, audits.--(a) Operator's records.--The Operator shall keep suitable records and accounts of the units of work performed and of any production in which the Government may have an interest; and shall preserve those with respect to work performed for at least three years after final payment by the Government, and those with respect to production for at least three years after any obligation to pay royalties to the Government has terminated. The Government may inspect and audit said records and accounts at any time, either by itself or by a certified public accountant. The Comptroller General of the United States or his representative, until the expiration of said three-year periods, shall have access to and the right to examine all pertinent books, documents, papers, and records of the Operator.

(b) Monthly reports.--The Operator shall provide the Government with five copies of monthly reports in three sections as follows:

(1) Operator's Monthly Voucher claiming costs for work performed;

(2) Operator's Progress Report showing the number of units of the various types of work performed; and

(3) a narrative report of the work performed during the reporting period, including adequate engineering-geological maps or sketches, drill hole logs and locations, and assay reports on samples taken concurrently with advance in mineralized ground.

(Forms for reporting under (1) and (2) above will be provided by the Government.)

(c) Final report.--Upon completion of the work or termination of the Government's obligation to contribute to costs, the Operator shall furnish the Government with five copies of a final report (in addition to the final monthly report). This final report shall include a geological and engineering evaluation of the results of the work performed under the contract with an estimate of the ore reserves resulting from such work, complete assay data, adequate geological and engineering maps or sketches, and a summary of the work performed and the unit costs thereof.

(d) Report of sales.--The Operator shall provide the Government with suitable accounting and documentary evidence covering all production to which the Government's royalty relates, such as copies of smelter or concentrator settlement sheets and certified accounts of production and sale or other disposition of production.

(e) Compliance with requirements.--If the Government determines that any of the Operator's reports, records, or accounts are insufficient or incomplete, or if the Operator fails to make them, the Government may procure the preparation or completion of same with suitable attachments as an expense of the work to which the Operator shall contribute. The Government may withhold approval and payment of any vouchers relating to insufficient or incomplete reports, records, or accounts.

ARTICLE 6. Repayment by Operator.--(a) Certification.--If the Government considers that mineral or metal production from the land covered by the contract may be possible as a result of the exploration work, it shall so certify in writing to the Operator at any time not later than six months after a sufficient final report and final accounting (see Article 5) have been furnished.

(b) Royalty on production.--The Operator, whether or not the producer (for example, if the Operator either transfers or does not retain his interest in the land), shall pay to the Government a royalty on all minerals and metals mined or produced from the land as follows:

(1) irrespective of any certification of possible production--from the date of the contract until the lapse of the time within which the Government may issue such certification or until the total net amount contributed by the Government is fully repaid with interest, whichever occurs first; or

(2) if the Government issues a certification of possible production--for a period of ten years from the date of the contract or until the total net amount contributed by the Government is fully repaid with interest, whichever occurs first.

(c) Payment of royalty.--(1) The Government's royalty shall be five percent of the ~~XXXXXXX~~ gross proceeds (including any bonuses, premiums, allowances, or other benefits) from the production sold, in the form sold (ore, concentrate, metal, or equivalent), at the point of delivery (the f.o.b. point); except, that charges of the buyer arising in the regular course of business and shown as deductions on the buyer's settlement sheets (such as treatment processes performed by the buyer, sampling and assaying to determine the value of the production sold, and freight payable by the buyer to a carrier (not the Operator)), shall be allowed as deductions in arriving at the "gross proceeds" as that term is used herein. No costs of the Operator are deductible in arriving at the "gross proceeds" as that term is here used.

The term "treatment processes" means those processes (such as milling, concentrating, smelting, refining, or equivalent, but excluding fabricating or manufacturing) applied to the crude ore or other production after it is extracted from the ground to put it into a commercially marketable form.

(2) The Government's royalty shall be computed and paid currently upon each lot sold, held, or used in integrated operations, as the case may be.

(d) Unsold production.--If any production (ore, concentrate, metal, or equivalent), after the lapse of six months from the date the ore was extracted from the ground, remains neither sold nor used by the Operator in integrated manufacturing or fabricating operations (for instance if it is stockpiled), the Government, at its option, as long as it so remains, may require the computation and payment of its royalty on the value of such production in the form (ore, concentrate, metal, or equivalent) it is in when the Government elects to require computation and payment. If any production is used by the Operator in integrated manufacturing or fabricating operations before the Government makes its election, the Government's royalty on such production shall be computed on the value thereof in the form in which and at the time it is so used. "Value" as here used means what is or would be gross income from mining operations for percentage depletion purposes in Federal income tax determination, or the market value, whichever is greater.

(e) Lien for payment.--To secure the payment of royalty (see Article 6(b)), the Operator hereby grants to the Government a lien upon his interest in the land and upon any production of minerals and metals therefrom until the royalty claim is extinguished by lapse of time or is fully paid.

(f) Notice to purchasers.--The Operator shall give notice of the Government's claim for royalty to any purchaser of the production, and shall authorize and direct such purchaser to pay the royalty directly to the Government and to furnish the Government with copies of the settlement sheets. If the records of any production and sales or other disposition of production, whether the production is by the Operator or by others, are not made available to the Government, the amount of the royalty may be estimated by the Government, and this estimate shall be final and binding upon the Operator.

(g) No obligation to produce.--Nothing in this contract shall be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any production operations.

(h) Government not obligated to buy.--Nothing in this contract shall be construed as imposing any obligation on the Government to purchase any minerals and metals mined or produced from the land.

ARTICLE 7. Termination of the Government's Obligations.--(a) If the Government determines that operations at any time have failed to achieve anticipated results and further work is not justified, the Government may give the Operator written notice thereof, and thereupon:

(1) the Government shall be free of all obligation to pay on account of units of work not then performed; and

(2) the Operator shall be free of all obligation to prosecute the work other than such as may be necessary and incidental to final accounting and reporting.

(b) If the Government determines that the Operator is in default under the terms of the contract, the Government may give the Operator written notice of such default with a specification of reasonable time within which the default must be cured; and if the Operator fails to cure such default as required, thereupon:

(1) the Government shall be relieved of all obligation to pay on account of units of work not performed when the notice was given, and

(2) the Operator shall be free of all obligation to prosecute the work other than such as may be necessary and incidental to final accounting and reporting.

The Government may also avail itself of any other remedy the law may provide for breach of contract, including the right to rescind the contract and to demand repayment of all moneys contributed by the Government under the contract.

(c) The giving of any notice by the Government under the provisions of this Article 7 shall not affect the Government's rights as provided for in the contract with respect to royalty and liens to secure the payment thereof, and such rights shall be fully preserved.

(d) The determinations of the Government are subject to appeal under Article 11.

ARTICLE 8. Notices to be given by the Government may be delivered to the Operator or may be sent by certified mail addressed to the Operator at his mailing address stated in this contract. If mailed, notices are deemed to have been delivered five days after the date of mailing.

ARTICLE 9. Officials not to benefit.--No member of or delegate to Congress or resident commissioner shall be admitted to any share or part of this contract or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

ARTICLE 10. Nondiscrimination.--In connection with the performance of work under this contract, the Operator agrees not to discriminate against any employee or applicant for employment because of race, religion, color, or national origin. The aforesaid provision shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Operator agrees to post hereafter in conspicuous places, available for employees and applicants for employment, notices to be provided by the Government setting forth the provisions of the nondiscrimination clause.

The Operator further agrees to insert the foregoing provision in all subcontracts hereunder, except subcontracts for standard commercial supplies or raw materials.

ARTICLE 11. Disputes.--Any dispute arising under this contract which is not disposed of by agreement shall be decided by the Director, Office of Minerals Exploration, who shall reduce his decision to writing and mail or otherwise furnish a copy thereof to the Operator. The decision of the Director, Office of Minerals Exploration, shall be final and conclusive unless, within 30 days from the date of receipt of such copy, the Operator mails or otherwise furnishes to the Director, Office of Minerals Exploration, a written appeal addressed to the Secretary. The decision of the Secretary or his duly authorized representative for the determination of such appeals shall be final and conclusive unless determined by a court of competent jurisdiction to have been fraudulent, or capricious, or arbitrary, or so grossly erroneous as necessarily to imply bad faith, or not supported by substantial evidence.

The term "Director, Office of Minerals Exploration," as used herein includes his duly authorized representative.

ARTICLE 12. Eight-Hour Law of 1912--Overtime compensation.--This contract, to the extent that it is of a character specified in the Eight-Hour Law of 1912, as amended (40 U. S. Code 324—326) and is not covered by the Walsh-Healey Public Contracts Act (41 U. S. Code 35—45), is subject to the following provisions and exceptions of said Eight-Hour Law of 1912, as amended, and to all other provisions and exceptions of said Law:

No laborer or mechanic doing any part of the work contemplated by this contract, in the employ of the Operator or any independent contractor contracting for any part of said work contemplated, shall be required or permitted to work more than eight hours in any one calendar day upon such work, except upon the condition that compensation is paid to such laborer or mechanic in accordance with the provisions of this clause. The wages of every laborer and mechanic employed by the Operator or any independent contractor engaged in the performance of this contract shall be computed on a basic day rate of eight hours per day; and work in excess of eight hours per day is permitted only upon the condition that every such laborer and mechanic shall be compensated for all hours worked in excess of eight hours per day at not less than one and one-half times the basic rate of pay. For each violation of the requirements of this clause a penalty of five dollars shall be imposed for each laborer or mechanic for every calendar day in which such employee is required or permitted to labor more than eight hours upon said work without receiving compensation computed in accordance with this clause, and all penalties thus imposed shall be withheld for the use and benefit of the Government.

ARTICLE 13. Copeland (Anti-Kickback) Act--Nonrebate of wages.--The regulations of the Secretary of Labor applicable to contractors and subcontractors (29 CFR, Part 3), made pursuant to the Copeland Act, as amended (40 U. S. C. 276c) and to aid in the enforcement of the Anti-Kickback Act (18 U. S. C. 874) are made a part of this contract by reference. The Operator will comply with these regulations and any amendments or modifications thereof and will be responsible for the submission of affidavits required of independent contractors thereunder. The foregoing shall apply except as the Secretary of Labor may specifically provide for reasonable limitations, variations, tolerances, and exemptions.

Vernon Hoffland
App'd. Sol. Off.
Klugscheid
Lumsden
Talbot
Selfridge

ARTICLE 14. Changes and added provisions.--

Executed in quintuplicate the day and year first above written.

GLEN LARSEN
(Operator)

By Glen Larsen

~~Title~~

THE UNITED STATES OF AMERICA

By Frank E. Johnson
Acting Director, Office of Minerals Exploration

I, _____, certify that I am the
(Name)

_____ secretary of the corporation named as Operator herein; that

_____, who signed this contract on behalf of the Operator, was then
(Name)

_____ of said corporation; that said contract was duly signed for
(Title)

and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.

[CORPORATE SEAL]

INT.-DUP. SEC., WASH., D.C. 52375

EXPLORATION PROJECT CONTRACT
GLEN LARSEN
DOCKET NO. OME-6015

ANNEX I

The land referred to in Article 2 of the Contract is situate in Juab County, Utah, and is comprised of the following patented lode claims, or parts thereof as indicated below:

Full Claims

Name	U. S. Survey No.
Una Lode	4548
Little Chief Lode	5171
Excelsior Lode	5171
Mild Winter Lode	5171
Iron Blossom Lode	Lot No. 115

Partial Claims

So much of the Little Giant Lode, U. S. Survey No. 5171, "limited to that portion which lies southerly of a straight line drawn from Corner No. 2 to Corner No. 5 of said Little Giant Lode, said line having a course and distance of S 67 degrees 17 minutes East, 599.1 feet."

The Operator is in possession of the land pursuant to a Lease and Agreement with Tintic Standard Mining Company, dated April 1, 1958, for a period of two years, with the proviso that it "shall remain in effect for successive and consecutive periods of one year each, unless terminated by reason of default on the part of the Lessee . . ."

The exterior boundary of this tract is described in the Lease and Agreement and is shown outlined by hatching on a map entitled, "Fig. 2 . . . Glen Larsen, Tintic Standard Mining Co., Iron Blossom Mine Property, map showing property boundary", attached to and made a part of this Contract.

EXPLORATION PROJECT CONTRACT
GLEN LARSEN
DOCKET NO. OME-6015

EXHIBIT "A"

Description of the Work

The purpose of the project is to explore for lead-copper ores by means of drifting, crosscutting, and sinking.

The work is divided into two stages, set forth below. The Operator shall perform Stage I, and shall perform as much of the Stage II work as the Government approves in advance.

The locations, directions, attitudes, and extent of all work performed under the Contract are subject to the prior approval of the Government. The exploration work is indicated in blue color on the attached map entitled, "Figure 3 - Composite Plan of Parts of the 200, 300, and 400 Levels Showing Recommended Exploration, Iron Blossom No. 1 Mine, Juab County, Utah."

Drifts and crosscuts shall be timbered as necessary with timber sets consisting of 8-inch by 8-inch timber or the equivalent in round timber, and shall be not less than 5 feet wide and 7 feet high in cross-section in the clear of the timber.

Stage I

1. Drift a maximum of 360 feet northerly from the north edge of the Muhlstein stope to explore the Muhlstein fissure, on the 300 level.

2. Drift a maximum of 80 feet southerly from a point 80 feet south of the Muhlstein stope to a point not closer than 100 feet from the property line. This drifting to be also along the Muhlstein fissure, on the 300 level.

3. Timber not in excess of 50 feet of the drifts.

4. Not in excess of 30 samples shall be assayed for lead, copper, zinc, silver and gold.

5. Drifts shall be a minimum of 5 feet by 7 feet in cross-section.

Stage II

Contingent upon the results of the Stage I work.

1. Deepen the Larsen winze an additional 105 feet. This winze shall be completely timbered, divided into two compartments, with the cage compartment to be 4 feet by 4 feet inside of timber. The untimbered winze shall be not less than 6 feet by 10 feet in cross-section.

2. On the 400 level, crosscut approximately 200 feet northwesterly to the Muhlstein fissure.

3. Drift a maximum of 300 feet northerly and southerly along the Muhlstein fissure, from the crosscut.

4. Timber not in excess of 64 feet of drifts or crosscut.

5. Not in excess of 30 samples shall be assayed for lead, copper, zinc, silver and gold.

6. Drifts and crosscuts shall be a minimum of 5 feet by 7 feet in cross-section.

ESTIMATED COSTS OF THE PROJECT

Fixed Unit Costs

Stage I

Drifting on 300 level 440 feet @ $35.00/ft.	$15,400.00	
Timbering drifts 50 feet @ $7.50/ft.	375.00	
Assaying 30 samples @ $5.00 each	150.00	$15,925.00

Stage II

Sinking Larsen winze 105 feet @ $94.00/ft.	$ 9,870.00	
Crosscutting on 400 level 200 feet @ $35.00/ft.	7,000.00	
Drifting on 400 level 300 feet @ $35.00/ft.	10,500.00	
Timbering drifts and crosscuts 64 feet @ $7.50/ft.	480.00	
Assaying 30 samples @ $5.00 each	150.00	$28,000.00
Estimated Total Cost of the Project (rounded to)		$43,926.00
Government's participation, 50%		$21,963.00

MME Form 52
Jan. 1959

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

MAR 2 1959
O.M.E.

FOR GOVERNMENT USE ONLY
Operator
Docket No. OME –
Contract No. 14-23-090 – 2003
Contract Date 6 JUN 1959

LIEN AND SUBORDINATION AGREEMENTS 1/

To the United States of America:

That certain land in the County of Juab, State of Utah;

described ~~as follows:~~ 2/ in a Lease and Agreement dated April 1, 1958

hereinafter called the "land", is the subject of a proposed exploration contract, hereinafter called the "Contract", between the United States of America, hereinafter called the "Government" and

Glen Larsen, of Eureka, Utah 3/

hereinafter called the "Operator". In consideration for and as an inducement to the Government executing the Contract, the undersigned:

1. (a) Being the owner of an interest in the land, hereby grants to the Government a lien upon all of his right, title, and interest in the land and upon any production of minerals therefrom to secure the payment to the Government of the royalty on production provided for by the Contract, and agrees if the Operator's interest should be surrendered or terminated at any time prior to the expiration of the rights of the United States under said Contract to pay royalty to the Government according to the terms of said Contract; or

(b) Being the holder of a claim, lien, or encumbrance against the land, hereby subordinates his claim, lien, or encumbrance in or against the land and in any production therefrom to the rights of the Government under the Contract with respect to royalty on production and liens to secure same. 4/

2. Undertakes and agrees that property in which the Government may acquire an interest or equity under the Contract may be dismantled, severed from the land, and removed as may be provided in the Contract; and the Government's interest and equity in such property shall be prior and superior to any adverse right or claim of the undersigned.

3. Represents and undertakes that there is no claim, lien, or encumbrance upon the undersigned's right, title, claim, or interest in or against the land other than the following: (If "none" insert the word "none". Do not leave blank.)

None

1/ Production from the land is not required, and in the absence of production there is no obligation to pay royalty to the Government.

2/ Either (a) insert the legal description of the land, or (b) strike out the words "as follows" and insert "in a lease /or contract, deed, or other document/ dated _____, and recorded in Book_____, Page____, official records of said county". If (b) is used, the book and page of recordation must be inserted above. If the space provided is insufficient, use an Annex and refer to the Annex in the space.

3/ Insert name exactly as it appears in the Application MME Form 40.

4/ Subparagraph 1(a) does not apply to the holder of a claim, lien, or encumbrance.

4. Undertakes and agrees (a) neither to commit any act nor assert any claim in conflict with the provisions of this Agreement; and (b) to give advance notice of the Government's rights under this agreement to any subsequent transferee, mortgagee, encumbrancer, or lessee of any of the undersigned's right, title, claim, or interest in or against the land or any production therefrom, furnishing the Government with two true copies of such notice; and

5. Consents to all amendments (including an agreement of termination) and assignments of the Contract without notice thereof, and undertakes and agrees that this agreement shall extend and apply thereto.

6. Added provisions None (State "None" or "See Annex No. ____".)

Dated this 20th day of February, 1959.

TINTIC STANDARD MINING COMPANY

By H. E. Raddatz, President (Seal)

1114 Walker Bank Building (Street)
Salt Lake City 11, Utah (City & State)

(Seal) (Street) (City & State)

(Seal) (Street) (City & State)

(Seal) (Street) (City & State)

(Seal) (Street) (City & State)

(Seal) (Street) (City & State)

I, Glen Hardy (Name), certify that I am the Secretary (Title—Secretary, etc.) of the corporation named herein; that H. E. Raddatz (Name), who signed this agreement was then President (Title—Pres., Vice-Pres., etc.) of said corporation; that said agreement was duly signed for and in behalf of said corporation by authority of its governing body, and was within the scope of its corporate powers.

Glen Hardy

(Corporate Seal)

Re Docket ome 6[illegible]5 (Lead copper)

GLEN LARSEN
IRON BLOSSOM MINE
JUAB COUNTY, UTAH

ASSETS:

Cash in Bank	400.00	
Ingersoll Compressor 315CFM	3000.00	
G.M.C. 165 HP Compressor	4000.00	
Air Hoist	1200.00	
1952 Ford pick up	600.00	
2 Rock drills w/jack legs	900.00	
2 single drum hoists	700.00	
2 4X12 air receivers	800.00	
Home in Eureka, Utah	4000.00	
1200 feet 2" pipe	600.00	
800 feet rail w/ splices	1200.00	
1955 Cadilac	2000.00	
1950 Cadillac	500.00	
Mine Tools	500.00	
Mancha motor & batteries	2000.00	
TOTAL ASSETS:		$22,400.00

OME
DEPARTMENT OF THE INTERIOR
MAY 14 1959
REGION III
DENVER, COLORADO

Liabilities:

GMAC	942.88	
Conoco	302.00	
H.A.C. Loans	400.00	
Utah Power & Light	28.42	
Gould Batteries Co.	954.00	
Centennial Development Co.	300.00	
Kamas State Bank	469.00	
TOTAL LIABILITIES:		$ 3,396.30

9 004

MAY 13, 1959

Glen Larsen

OFFICIAL FILE COPY
O. M. E.
RECEIVED MAY 25 1959

DATE	INITIALS	CODE

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
224 New Customhouse
Denver 2, Colorado

May 8, 1959

OFFICIAL FILE COPY
O. M. E.
RECEIVED MAY 11 1959

DATE		CODE
5/11	a	220
5/12	~~wpb~~	500

Memorandum

To: Chairman, Operating Committee, OME

From: Executive Officer, OME Field Team, Region III

Subject: Docket OME 6015 (Lead-Copper) Glen Larsen (Iron Blossom mine) Juab County, Utah

Under date of April 29, 1959, the applicant submitted the original and three copies of material to supplement the application submitted previously. The original copy is enclosed for your files.

J. W. Townsend

J. W. Townsend

Enclosure

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
REGION III

INTERMOUNTAIN
EXPERIMENT STATION

OME
DEPARTMENT OF THE INTERIOR
MAY 6 - 1959
REGION III
DENVER, COLORADO

1600 EAST 1ST SOUTH STREET
SALT LAKE CITY, UTAH

May 5, 1959

Memorandum

To: J. W. Townsend, Executive Officer, OME Field Team, Region III

From: M. H. Howes

Subject: Docket No. OME-6015 (Lead-copper), Glen Larsen, Iron Blossom No. 1 mine, Juab County, Utah

Enclosed are the original and two copies of a letter from the subject applicant offering an amendment to his original application, and three copies of a composite map showing original and new proposed projects, to be attached to the various copies of the original application. One copy each of the letter and the map have been retained in this office to be attached to our copy of the original application.

M. H. Howes
M. H. Howes

Enclosures

cc: J. B. Clemmer

OFFICIAL FILE COPY
O. M. E.
RECEIVED MAY 11 1959

DATE	INITIALS	CODE

GLEN LARSEN

Eureka, Utah

April 29, 1959

OME
DEPARTMENT OF THE INTERIOR
MAY 6 - 1959
REGION III
DENVER, COLORADO
OFFICIAL FILE COPY
RECEIVED MAY 11 1959
M. E.
DATE INITIALS

Office of Minerals Exploration, Region III
U. S. Department of the Interior
C/O Mr. M. H. Howes
Bureau of Mines Building
1600 E. Fist South
Salt Lake City 12, Utah

Re: OME 6015
February 20, 1959

Gentlemen:

The applicant in the above numbered request offers the following as an amendment to his original application:

(a) To add Project No. 6, drifting southwesterly 160 feet on the 400 Level, beginning at point "L" on a well-defined fissure. The cost of this will be proportional to that of Project No. 3 on the same level, or a total of $4,320.00.

(b) To eliminate from Project No. 2 the driving of 65 feet of crosscut, costing $2,075.97.

(c) To add Project No. 7 on the 400 Level, 305 feet of crosscutting westerly from the Larsen Winze, which will intersect the 400 Level at point "K" instead of at point "A". This is aimed to intersect a fissure projected southwesterly from point "P" and also to intersect intervening fissures. The workings on this level between points "K", "N", and "P" are presently inaccessible due to excessive caving. The cost of the proposed Project No. 7 will be proportional to that of Project No. 3, or a total of $8,235.00. This fissure at point "P" is described as being 16 inches wide, showing iron and manganese oxides, and containing ore values.

AMENDMENT TO APPLICATION.

Reference is made to applicant's supplemental letter of April 16, 1959, which names other objectives to be pursued in reopening the 400 Level. In addition to these, there is another objective at point "M" (Map 8-4, revised April 1959), where a winze, 54 feet deep, can be retimbered for the purpose of exploring below the 400 Level.

	Feet	Cost	Per Foot
Project No. 1, Sinking Winze	105	$ 6,012.50	$ 57.26
Project No. 2, Cleanup 400 Level	210	2,904.63	13.83
Project No. 3, Drift on 400 Level	100	2,610.64	26.11
Project No. 4, Drift on 300 Level	360	9,500.85	25.84
Project No. 5, Drift on 300 Level	115	2,832.05	24.28
Project No. 6, Drift on 400 Level	160	4,320.00	27.00
Project No. 7, Crosscut on 400 Level	305	8,235.00	27.00
		$ 36,415.67	

Office of Minerals Exploration, Region III

April 29, 1959

Time Schedule of Work (Revised)

	Project No.	Distance	Average Daily Progress	Dates Start	Dates Completion
1.	Larsen Winze	105	2 feet	Zero	10th week
2.	Cleanup 400 Level	210	14	15th week	18th
	Retimbering 400 Level	40	(3 days)		19th
3.	Drift 400 Level	100	5	19th	23rd
4.	Drift 300 Level	360	5	Zero	15th
5.	Drift 300 Level	115	5	16th	21st
6.	Drift 400 Level	160	5	24th	31st
7.	Crosscut 400 Level	305	5	11th	23rd

Note: It may be necessary to adjust the chronology of this schedule, depending upon availability of equipment for the various headings in the order named.

Map No. 8-4 (Revised April 1959) accompanies this request.

Respectfully submitted,

Glen Larsen

Glen Larsen

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
224 New Customhouse
Denver 2, Colorado
February 26, 1959

OFFICIAL FILE COPY
O. M. E.
RECEIVED MAR 2 1959

DATE	INITIALS	CODE

Memorandum

To: Chairman, Operating Committee, OME

From: Executive Officer, OME Field Team, Region III

Subject: Application for Federal Aid under OME Program, (Lead-Copper-Silver-Gold) Glen Larsen (Iron Blossom mine) Juab County, Utah

Enclosed are the original and two copies of the subject application. Also enclosed are the following:

1. Five copies of Form MME-52, executed by Tintic Standard Mining Company.

2. One copy of Lease and Agreement, dated April 1, 1958, between Tintic Standard Mining Company and the applicant.

3. One copy of a letter from Home Acceptance Corporation, denying the applicant's request for loan and attached copy of the applicant's request for loan.

4. One copy of a letter from Kamas State Bank denying the applicant's request for loan and attached copy of applicant's request for loan.

The applicant proposes an exploration program consisting of winze sinking, crosscutting, and drifting at a total estimated cost of $25,936.64, which is essentially the same program on a reduced basis as they proposed under Docket No. DMEA 5004. Our review of the two applications indicate the following similarity:

New Application	Docket DMEA No.5004
Project 1	Project 1
Project 2	Project 4 in part
Project 3	New
Project 4	New
Project 5	Project 8

The application under Docket No. DMEA 5004 was denied by Mr. Mittendorf's letter to the applicant, dated June 30, 1958.

One copy of the application is being retained in this office.

J.W. Townsend

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
224 New Customhouse
Denver 2, Colorado

April 28, 1959

OFFICIAL FILE COPY
O. M. E.
RECEIVED MAY 1 1959

DATE	INITIALS	CODE
5/1	G	220
5/4	a U.	500

Memorandum

To: Chairman, Operating Committee, OME

From: Acting Executive Officer, OME Field Team, Region III

Subject: Docket OME-6015 (Lead-Copper) Glen Larsen (Iron Blossom No. 1 mine) Juab County, Utah

The applicant has submitted the original and three copies of supplemental information to be included with his application.

The original is attached; will you please place it with your copies of the application.

E. N. Harshman

E. N. Harshman

Attachment

GLEN LARSEN

Eureka, Utah

April 16, 1959

OME
DEPARTMENT OF THE INTERIOR
APR 27 1959
REGION III
DENVER, COLORADO

Office of Minerals Exploration, Region III
Department of the Interior
C/O Mr. M. H. Howes
Bureau of Mines Building
1600 E. First South
Salt Lake City 2, Utah

Re: OME 6015
February 20, 1959

Gentlemen:

In connection with Section 4 (a), Projects Nos. 1, 2, and 3, the applicant wishes to supplement the information by further explanation.

It is not the intention of the applicant to limit the work on the 400-Level to the three projects listed. Additional exploration and development is contemplated after the completion of these three.

Please refer to map No. 332-400 Level. On this level at a point about twenty feet west of survey station numbered 2037, striking southwesterly, there is a fissure which is to be explored to the limits of the property, a distance of about 275 feet. This fissure is thought to have very good possibilities for ore development, particularly a short distance above the level.

Again referring to the same map, far to the north, between survey stations 2180 and 2181, a distance of about 110 feet, there is a strong fissure to be prospected. Also near survey station 3912, there is a prominent vein of manganese and iron oxides, in proximity to a small porphyry dike, which is considered to be a good prospect.

Referring to map No. 8-4, from point "A" northerly a distance of 120 feet, there is a strong vein showing low-grade ore, which should be prospected by raising and sinking.

Again on map No. 332-400 Level, in the crosscut eastward from the No. 1 Shaft, a 16-inch vein near station No. 486 is considered to have good possibilities.

The above are but a few of the possibilities for exploring and developing ore on the 400-Level. In addition, the ore recently found on the ~~Gold Fissure below the 300 Level~~ cannot be mined at a profit unless access is obtained to it by sinking the Larsen Winze from the 300 to the 400-Level.

OFFICIAL FILE COPY
O. M. E.
RECEIVED MAY 1 1959

DATE	INITIALS	CODE

Respectfully submitted,

Glen Larsen

Glen Larsen

MME Form 40
Dec. 1958

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

Budget Bureau No. 42–R1368
Approval expires Dec. 31, 1963

APPLICATION FOR FINANCIAL ASSISTANCE IN MINERALS EXPLORATION

Pursuant to Public Law 85–701 (72 Stat. 700; 30 U.S.C. 641)

MAR 2 1959 O.M.E.

NAME OF APPLICANT *(Full legal name and mailing address as they should appear on contract if one is executed.)*

Glen Larsen
Eureka, Utah

OME
DEPARTMENT OF THE INTERIOR
FEB 26 1959
REGION III
DENVER, COLORADO

APPLICANT DO NOT USE THIS BLOCK

DOCKET NUMBER: OME 6015

DATE RECEIVED: 3-2-59

REGION: III

DIVISION CODE: 500

BUSINESS ORGANIZATION *(Check one)*

INDIVIDUAL	X
CORPORATION	
PARTNERSHIP	
OTHER *(Specify)*	

STATE IN WHICH FIRM IS ORGANIZED

LIST CORPORATE OFFICERS OR PARTNERS HERE, IF APPLICABLE

NAME	ADDRESS	TITLE

MINERAL(S) FOR WHICH YOU WISH TO EXPLORE: Lead, copper, silver, gold

ESTIMATED COST OF PROJECT: $ 25,936.64

PROPERTY NAME: Iron Blossom No. 1 Mine of Tintic Standard Mining Company

LOCATION COUNTY: Juab County

LOCATION STATE: Utah

GENERAL INSTRUCTIONS

Before filling out this application, please read the *OME Regulations for Obtaining Federal Assistance in Financing Explorations for Mineral Reserves* (30 CFR Chap. III). To assure prompt action, your application must provide all applicable material and information specified on the back of this application form. Avoid unnecessary correspondence and delays by submitting complete and accurate information. *Please submit four copies of this application and all accompanying papers* except as otherwise noted. Place your name and address on each sheet. Each item of information, maps, and reports required as a part of this application is described on the back of this form. Identify each attached statement by the item number to which it applies. If an item does not apply to your application, show the item number on your statement and after it write "not applicable." Maps or sketches should be used to supplement narrative descriptions of the property location and boundaries in item 2, existing mine workings and geology in item 3, and the proposed exploration work in item 5. When this information is not too complex, all of it may be shown on one map or sketch. All documents and other attachments submitted as a part of this application, except those in item 3(g) which you mark to be returned, become the property of the Government and will not be returned to the applicant. Send true copies, *not originals*, of leases, contracts, and other documents which are an essential part of your business records. *File this application with the Office of Minerals Exploration, Department of the Interior, Washington 25, D. C., or with the nearest OME Field Office.*

CERTIFICATION

The undersigned, whether as an individual, corporate officer, partner, or otherwise, both in his own behalf and acting for the applicant, certifies that the information set forth in this form and accompanying papers is correct and complete, to the best of his knowledge and belief, and that he would not ordinarily undertake the proposed exploration under current conditions and circumstances at his sole expense.

Feb. 20, 1959
DATED

Glen Larsen
BY *(Signature)*

TITLE

A wilfully false statement or certification to any Department or Agency of the United States Government is a criminal offense. U. S. Code, Title 18, Sec. 1001.

INFORMATION REQUIRED WITH THIS APPLICATION

1. Financial Eligibility:

(a) Submit evidence of efforts made within 90 days preceding the filing of this application to obtain credit from your bank of account and at least one other banking institution or other private source of credit. Such evidence shall include true copies of correspondence which show: (1) date of loan request, (2) amount and terms requested, (3) proposed use of loan funds, and (4) the replies from credit sources. If the loan was offered under terms which you consider unreasonable, state why you consider them so.

(b) List names and addresses of affiliated, parent, or controlling companies or organizations and state extent and nature of their interest.

(c) State how you propose to furnish your share of the exploration [redacted] cost.

2. Applicant's Rights in Land:

(a) State your interest in the land and mineral rights, whether owner, lessee, purchaser under contract, or other. If you are not the owner, submit one true copy of the lease, contract, or other document (with address of owner) under which you control the property. Describe all liens, mortgages, or other encumbrances on the land and state book and page number and official place where recorded.

(b) State the legal description (section, township, and range; metes and bounds; patent number of claims) of the land upon which you wish to explore and all adjacent land which you own or control. Describe any part of the land or workings which should not be subject to Government royalty and liens. If the land consists of unpatented claims, state book and page number for each recorded location notice, including amended locations, and official place where recorded. State all the names by which you know the property.

(c) For all land or mineral rights encumbered or not owned, submit five copies of Lien and Subordination Agreements on MME Form 52. If the agreements cannot be obtained, state reasons and provide copies of letters of refusal.

3. Physical Description:

(a) Describe in detail and illustrate with maps or sketches all mining or exploration operations which you know have been or are being conducted upon the land. Include existing mine workings and all production facilities.

(b) State your interest, if any, in operations described in (a).

(c) State, if you know, the past and current production, supporting your statement with copies of settlement sheets, mine records, or published data if available.

(d) Describe known ore reserves, giving quantities and grades and sampling methods used. Support your statement with copies of assay certificates and assay maps if available.

(e) Describe by narrative and maps or sketches the geologic features of the property, including ore minerals, geologic formations if known, and type of deposit (vein, bedded, etc.).

(f) State your reasons for expecting to find ore, and if you have sampled the area you propose to explore, show where the samples were taken, describe sampling methods used, and provide copies of assay certificates.

(g) Send with your application at least *two* copies of all geologic or engineering reports, assay maps, or technologic information which you have, indicating whether you require their return.

4. Accessibility of Property:

(a) To aid the OME representative who may examine the property, state name and address of person who will meet him; give directions for reaching the property; and describe accessibility of property and of any mine workings.

(b) Name the shipping and supply points and state the distances to the property.

5. Exploration Work:

(a) Describe fully the proposed exploration work giving individual footages and sizes of openings *for each item of work.* Use narrative, maps, plans, and sections as necessary. Show location of the proposed work as related to geologic features such as veins, ore-bearing beds, contacts of rock formations, etc. Show also the relation of the proposed work to any existing mine workings and to *land boundaries* or to the closest identifiable corner.

(b) If an access road must be built, show the proposed location on the property map and state the length, type and construction methods proposed.

(c) If an OME contract is executed, state how soon thereafter work would be started and finished. State your anticipated average daily or monthly rate of progress for each type of work.

6. Experience:

State your operating experience and background to conduct this exploration work and also that of the person who will supervise the work.

7. Estimate of Costs:

Furnish detailed estimates of the necessary costs *for each item of the work proposed in 5(a)* under the headings listed below with a total for each heading and the estimated total cost of the work. Costs for any work to be performed by an independent contractor should be listed separately under category (a) below. Costs for any work that is not to be performed by an independent contractor should be listed under categories (b) through (g).

(a) Independent contracts. State the total cost of any proposed independent contract for all or any part of the work, and the number of units and the unit cost for each type of work, such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, or per cubic yard of material moved. Cost estimates should be supported by bids from three contractors if possible. (*Note*—If none of the work is to be contracted, write "none" after this item.)

(b) Personal services. The cost of supervision, engineering and geological services, outside consultants, and labor should be itemized by numbers and classes of employees; rates of wages, salaries or fees; and periods of employment. State whether these services are available.

(c) Operating materials and supplies. List items of material and supplies giving quantity and cost of each. Include under this heading power, water, and fuel, and units of equipment and tools costing less than $50 each.

(d) Operating equipment. List items of equipment and tools costing $50 or more per unit. Give specifications and indicate how each item is to be acquired—i.e., rented, purchased or provided by the applicant. If rented or purchased, state the estimated rental or purchase price. If furnished by the applicant, state condition and present fair market value.

(e) Initial rehabilitation and repairs. Describe the type and the cost of *initial* rehabilitation or repair of existing buildings, fixtures, installations (exclusive of mine workings), and movable operating equipment now owned by the applicant which will be used in the exploration work.

(f) New buildings, fixtures, installations. Describe each building, fixed improvement, and installation to be purchased, constructed, or installed for the exploration work, stating specifications and cost including labor, materials, and supervision.

(g) Miscellaneous. Describe the type and estimate the cost of repairs and maintenance of the operating equipment listed in 7(d). Do not repeat initial repairs listed in 7(e). Show also the costs of analytical work, accounting, workmen's compensation and employees' liability insurance, payroll taxes, and other required costs that do not fall within the previous categories. [*Note*—The Government will not contribute to costs incurred before the date of the contract, or to costs of or incident to: (1) acquiring, using, or possessing land and any existing improvements, facilities, buildings, installations, and appurtenances, or the depreciation and depletion thereof; (2) general overhead, corporate management, interest and taxes (other than payroll and sales taxes); (3) insurance (other than employees' liability insurance); and (4) damages to persons or property (other than authorized repair to or replacement of equipment or other property used in the work).]

-DUP. SEC., WASH., D.C. 48740

OFFICIAL FILE COPY
O. M. E.
RECEIVED MAR 2 1959
DATE | INITIALS | CODE

Glen Larsen, Eureka, Utah — Supplemental Sheet A

2 1.(a) Legal description of mining claims (as patented) to be included in this project, is as follows:

U. S. Mineral Survey No. 4548 Una lode,
" " " " " 5171 Little Chief lode,
" " " " " 5171 Excelsior lode,
" " " " " 5171 Mild Winter lode,
" " " " " Lot No. 115 Iron Blossom lode
" " " " " 5171 Little Giant lode (limited to that portion which lies southerly of a straight line drawn from Corner No. 2 to Corner No. 5 of said Little Giant lode, said line having a course and distance of S. 67° 17' E. 599.1 feet.) (See Map No. 8-2)

Description of the exterior boundaries of this tract is given in a Lease and Agreement, dated April 1, 1958, by and between Tintic Standard Mining Company as Lessor and Glen Larsen as Lessee.

The said mining claims constitute only a portion of the property of the owner, Tintic Standard Mining Company. (See Map 8-2).

1.(b) The property is known by the name Iron Blossom Mine.

1.(c) The applicant herein holds the described property under a Lease and Agreement, dated April 1, 1958, one exact copy of which is herewith included.

1.(d) There are no liens, mortgages, or other incumbrances on the property.

3 2. Physical Description.

(a) The premises held by the applicant, under Lease and Agreement above referred to, include extensive underground workings shown in part in composite form on Map 310. The only present access to these workings is through No. 1 Tunnel. All other former adits are inaccessible.

The applicant has rehabilitated Tunnel No. 1 through a distance of about 300 feet beginning at the portal, has sunk the Larsen Winze to a depth of about 100 feet below the tunnel, has reopened extensive workings on the 300 Level, has driven a new drift, ("F" to "G" on Map 8-4) about 150 feet, connecting with the Muhlstein Stope, and has driven a new drift ("H" to "J" on Map 8-4) about 220 feet.

The applicant has equipped his operation with a Diesel-powered compressor, mine track, air-powered hoist, mine cars, rock drills, etc. A wooden ore bin near the mine portal affords storage for ore prior to transportation to the Utah smelters. There are no other operations within the leased premises.

2.(b) The applicant is the only operator within the described premises and his interest is that of lessee.

2.(c) The entire Iron Blossom property has a record of production that dates back more than fifty years. The total known production is in excess of 636,000 dry tons of crude ore from which, according to published reports, dividends amounting to $3,525,000 were paid.

2.(d) There are no known commensurable ore reserves on the property. Production during the past twenty five or thirty years has been made under the leasing system in which the operators have mined along extensions of fissures, stope fills left as gob, and low-grade ores in blocks between old stopes. Many of such small extensions of old workings have not been surveyed or mapped and are not shown on existing maps. The applicant has encountered on the 300 Level a small body of ore adjacent to a caved raise (not shown on maps). This ore does not extend above the 300 Level but is expected to be encountered on the 400 Level. Shipments of about 400 tons of this ore have assayed 0.13 to 0.20 ounces gold, 5.0 to 14.5 ounces silver, 4.7 to 6.5% lead, 41.5 to 53.8% silica, with somewhat higher values in silver and lead for shipments not yet settled for.

2.(e) The geology and ore deposits of the property are described in U. S. Government publications covering the Tintic District.

2.(f) The applicant, by reason of many years of mining experience in the Tintic District, especially in the Iron Blossom mine and in the Dragon mine which adjoins the south end of the Iron Blossom, has an intimate knowledge of many of the old workings, is familiar with the habit of the ore occurrence, with the trend of the fissures, and with the history of many of the workings from which ore has been mined by lessees. He expects to find ore by following extensions of known fissures and by entering unexplored areas adjacent to old stopes.

2.(g) Four copies of each of the following maps are included with this application:

No. 8-2 Claim Map - 200 Scale
No. 8-4 Project Map - 40 Scale
No. 310 Composite Map of Workings - 100 Scale
No. 332 200 Level with some geology - 100 Scale
No. 332 400 Level with some geology - 100 Scale

3.(a) The project is accessible from Eureka, Utah, by road. The OME representative should contact the applicant at Eureka, Utah by telephone.

3.(b) Eureka, Utah is the shipping and supply point and is approximately three miles north of the project.

4. The Exploration Project.

(a) Project No. 1 - Sinking. The Larsen Winze, 6 x 10 feet in cross-section, is to be extended from the 300 Level to the 400 Level, distance 105 feet. From the 200 Level to the 300 Level, this winze is equipped with a cage and air-powered hoist to handle one-ton capacity cars. The cage compartment is 4 x 4 feet inside of timber. The man-way side, below the 300

Level is planned for sinking with a bucket while the cage is being used from the 300 Level to the 200 Level for hoisting waste from all of the project operations on the 300 Level. The winze is to be timbered on six-foot centers and fully lagged. The rock to be penetrated is rhyolite (or monzonite-porphyry), firm but not excessively hard, shatters well and without excessive overbreak.

Project No. 2 - Crosscutting - 400 Level - 5 x 7 feet in cross-section. From the Larsen Winze Station, after completion of Project No. 1, drive S 65° W. 65 feet to point "A" for connection with existing 400 Level. From point "A", rehabilitate the drift going southerly to point "B", about 210 feet.

Project No. 3 - Drifting - 400 Level - 5 x 7 feet in cross-section. From point "B", drive about 100 feet northerly to explore a fissure.

Project No. 4 - Drifting - 300 Level - 5 x 7 feet in cross-section. From point "C", near Muhlsteim Stope, drive northerly about 360 feet toward point "D", to explore a fissure in an area which is previously unexplored between the 200 and 400 Levels. The purpose in driving from south to north is that the waste rock produced in the exploration can be disposed of in the Muhlstein Stope, which is open below the 300 Level.

Project No. 5 - Drifting - 300 Level - 5 x 7 feet in cross-section. From point "E", drive southerly about 115 feet to explore a known fissure.

4.(b) No access road is necessary.

4.(c) Time Schedule of work.

Project No.	Distance	Average Daily Progress	Dates Start	Dates Completion
1 Larsen Winze	105 feet	2 feet	Zero	10th week
2 Crosscut, 400 Level	65	5	11th	13th
Cleanup " "	210	14	13th	16th
Retimbering" "	40	(2 days)		16th
3 Drift, 400 Level	100	5	17th	20th
4 Drift, 300 Level	360	5	Zero	15th
5 Drift, 300 Level	115	5	16th	21st

Note: It may be necessary to adjust the chronology of this schedule, depending upon availability of equipment such as the loading machine, for work in the various headings.

5. Experience. The applicant will be the working supervisor of all the operations. He has been mining in the same locality during the past sixteen

years. Included in this experience are one year as mine foreman for Newmont Mining Company at its lease in the Apex Standard Mine, one year as foreman for International Smelting and Refining Company at its Godiva Mine. Most of his experience has been in leasing as an independent operator, in which he has been successful.

6. Estimate of Costs.

(a) There will be no independent contracts.

(b) Personal Services. The following schedule includes the applicant, and these workmen are presently available.

1	Hoistman	@ $ 20.26/day	$ 20.26
1	Topman-Trammer	20.26	20.26
4	Miners	20.26	81.04
	Labor, per day		$ 121.56
	Labor, per week of 5 days		$ 607.80

Services of an engineer-geologist are expected to cost not more than $100.00 per month, or an average of approximately $25.00 per week.

Total cost of labor and engineer services, Projects 1, 2, 3 $ 632.80/wk.

(c) Operating Materials and Supplies.

Winze timber, 16 sets

32 pcs.	8 x 8 - 10	1706' BM	@ 85.00	$ 145.01
16	8 x 8 - 12	1024	"	87.04
6	6 x 8 - 12	288	"	24.48
500	2 x 12 - 6	6000	75.00	450.00
16	4 x 4 - 14 guides	298	120.00	35.76
Blocks and wedges		768	85.00	65.28

Timber cost per foot of winze $ 8.00
Hanging rods " " " " 1.00

Explosives cost per foot of winze or drift $ 4.00

Miscellaneous hand tools, such as axe, hammer, pick, shovel, saws, pipe wrench, track wrench, square, per foot of drift $ 0.50

Fuel for Diesel engine	50.00/week
Oil for engine, compressor, drills, loader	5.00
Gasoline for trucking water and supplies	10.00
Total for fuel, oils, gasoline	$ 65.00/week

(c) Operating Materials and Supplies - Cont'd.

Mine track, 12# rails in 15-ft. lengths 9½ lb.	$ 1.52/ft. of drift
Splices and bolts	.08
Spikes	.02
Wooden ties 4x4-2½ @ 25¢/ft.	.07
Total, track complete	$ 1.69
Track switches	15.00 each
Pipe for compressed air, 2", per foot	0.55
Couplings each	0.85
Tees	1.50
Unions	1.70
Elbows	1.05
Valves, plug cock	13.00

(d) Operating Equipment, supplied by applicant

			Present Value	Depreciation Charge per month	Depreciation Charge per week
$2,000.00	1	Mancha B locomotive, with charger, less battery and transformers	$ 3,600	$ 60.00	$ 13.80
?	1	Eimco 12B loader	2,000	35.00	7.70
1,200.00	1	Air-powered hoist	1,200	20.00	4.60
?	10	Mine cars	1,000	17.00	3.80
3,000.00	1	Compressor, 315 C.F.M.	3,000	50.00	11.50
4,000.00	1	Diesel engine, 165 HP	4,000	67.00	15.40
?	1	Scraper	100	1.50	.40
?	1	Double-drum slusher hoist	600	10.00	2.30
700.00	2	Single-drum tuggers	700	13.00	2.70
?	1	Pickup truck	1,500	25.00	6.00
600.00	1	Pickup truck	600	10.00	2.30
900.00	2	Rock drills with jackleg	900	15.00	3.40
		Totals	19,200	323.50	73.90
		Operating equipment to be purchased			
	1	Locomotive Battery	900	15.00	3.40
	2	Transformers, 5000-440/220 volts (smaller sizes not available for this voltage)	1,000	17.00	3.80
	2	Rock Drills with jackleg	1,000	17.00	3.80
		Totals	2,900	49.00	11.00
		Total cost of operating equipment	$ 22,100	$ 372.50	$ 84.90

(e) Initial Rehabilitation and Repairs. None

(f) New Buildings, Fixtures, Installations. None

(g) The estimated cost of repairs and maintenance expected during project operations is included in the item for contingencies listed for each part of the project individually. Payroll cost in addition to direct labor cost, including workmen's compensation insurance, FICA tax, unemployment compensation tax, occupational disease compensation insurance, liability insurance, vacation pay, are calculated at the rate of 15% of labor cost.

6. Summary of Costs. Labor and fuel costs are halved between two headings working simultaneously.

Project 1 - Larsen Winze - 300 to 400 Level - 105 feet - 10 weeks.

Labor @ ½ of $632.80 per week	$ 3,164.00	
Additional payroll cost, 15% of above	474.60	
Fuel, oils, gasoline ½ of $65.00 per week	325.00	
Drill steel and bits @ $0.25 per foot	26.25	
Explosives @ $4.00 per foot	420.00	
Timber See 6.(c)	840.00	
Hanging rods @ $1.00 per foot	105.00	
Pipe and fittings, 105' @ 55¢, 2 valves 26.00, 4 couplings 3.40, 1 tee 1.50	75.65	
Miscellaneous tools @ $0.50 per foot	52.50	
Equipment depreciation ½ of $84.90 per week	424.50	
Contingencies @ $1.00 per foot	105.00	$ 6,012.50

Project No. 2 - Crosscut on 400 Level - 65 feet - 3 weeks.

Labor	1,101.15
Additional payroll cost	165.17
Fuel, oils, gasoline	97.50
Drill steel and bits	16.25
Explosives	260.00
Timber, 10% of distance @ $3.60 per foot	23.40
Track, $109.85¢ crossover switch $25.00	134.85
Pipe and fittings	52.80
Miscellaneous tools	32.50
Equipment depreciation	127.35
Contingencies	65.00
	2,075.97

Cleanup on 400 Level - 210 feet - 4 weeks.

Labor	1,468.20
Additional payroll expense	220.23
Fuel, oils, gasoline	130.00
Timer, 30 feet @ $3.60 per foot	108.00
Carried forward	1,926.43

Project No. 2 - Cleanup on 400 Level - 210 feet - 4 weeks - Cont'd.

Brought forward	$ 1,926.43	
Mine track	354.90	
Pipe and fittings	138.50	
Miscellaneous tools	105.00	
Equipment depreciation	169.80	
Contingencies	210.00	
	2,904.63	$ 4,980.60

Project No. 3 - Drift on 400 Level - 100 feet - 4 weeks.

Labor @ ½ of $632.80/week	1,265.60	
Additional payroll cost, 15% of above	189.84	
Fuel, oils, gasoline ½ of $65.00/week	130.00	
Drill steel and bits @ 25¢/ft.	25.00	
Explosives @ $4.00/ft.	400.00	
Timber, 10% of distance @ $3.60/ft.	36.00	
Track @ $1.69/ft., switch @ $15.00	184.00	
Pipe and fittings	60.40	
Miscellaneous tools @ 50¢/ft.	50.00	
Equipment depreciation ½ of $84.90/week	169.80	
Contingencies @ $1.00/ft.	100.00	2,610.64

Project No. 4 - Drift on 300 Level - 360 feet - 15 weeks.

Labor @ ½ of $632.80/week	4,746.00	
Additional payroll cost, 15% of above	711.90	
Fuel, oils, gasoline ½ of $65.00/week	487.50	
Drill steel and bits @ 25¢/ft.	90.00	
Explosives @ $4.00/ft.	1,440.00	
Timber, 10% of distance @ $3.60/ft.	129.60	
Track @ $1.69/ft., 2 switches @ $15.00	623.40	
Pipe and fittings	245.70	
Miscellaneous tools @ 50¢/ft.	180.00	
Equipment depreciation ½ of $84.90/week	486.75	
Contingencies @ $1.00/ft.	360.00	9,500.85

Project No. 5 - Drift on 300 Level - 115 feet - 5 weeks.

Labor @ ½ of $632.80/week	1,584.00	
Additional payroll cost, 15% of above	237.60	
Fuel, oils, gasoline ½ of $65.00/week	162.50	
Drill steel and bits @ 25¢/ft.	28.75	
Explosives @ $4.00/ft.	115.00	
Timber, 10% of distance @ $3.60/ft.	41.40	
Track @ $1.69/ft., 1 switch $15.00	194.35	
Pipe and fittings	83.70	
Miscellaneous tools @ 50¢/ft.	57.50	
Equipment depreciation ½ of $84.90/week	212.25	
Contingencies @ $1.00/ft.	115.00	2,832.05

Glen Larsen, Eureka, Utah

Supplemental Sheet H

Tabulation of Costs.

	Feet	Cost	Per Foot
Project No. 1 Sinking Winze	105	$ 6,012.50	$ 57.26
Project No. 2 Crosscut, 400 Level	65	2,075.97	31.94
Cleanup, 400 Level	210	2,904.63	13.83
Project No. 3 Drift, 400 Level	100	2,610.64	26.11
Project No. 4 Drift, 300 Level	360	9,500.85	25.84
Project No. 5 Drift, 300 Level	115	2,832.05	24.28
		$ 25,936.64	

Sinking	105	6,012.50	57.26
Drifting & crosscutting	640	17,019.51	26.41
Cleanup	210	2,904.63	13.83
		$ 25,936.64	

Item totals:

Labor	13,328.95
Additional payroll expense	1,999.34
Fuel, oils, gasoline	1,332.50
Drill steel and bits	186.25
Explosives	2,635.00
Timber	1,283.40
Track	1,491.50
Pipe and fittings	656.75
Miscellaneous tools	477.50
Equipment depreciation	1,590.45
Contingencies	955.00
	$ 25,936.64

7.(a) The applicant is prepared to furnish his share (50%) of the cost of the proposed project in the form of

(b) Labor and of use of equipment owned by him.

THE BANK OF SPANISH FORK

SPANISH FORK, UTAH
April 3, 1959

OME
DEPARTMENT OF THE INTERIOR
APR 6 - 1959
REGION III
DENVER, COLORADO

Mr. Glen L. Larsen
Eureka, Utah.

Dear Mr. Larsen:

Your Loan application for $15,000.00 has been reviewed by our Loan Committee, however, the loan has been declined We are not making loans on Mining Equipment and the property is located out of our Area.

This refusal in no way reflects upon your credit Standing but is based as shown above.

Very truly yours,

Vice Pres. & Cashier.

MEMBER FEDERAL RESERVE SYSTEM
MEMBER FEDERAL DEPOSIT INSURANCE CORPORATION

Eureka, Utah
April 2, 1959

OME
DEPARTMENT OF THE INTERIOR
APR 6 - 1959
REGION III
DENVER, COLORADO

The Bank of Spanish Fork
Spanish Fork, Utah

Dear Sirs:

I would like to apply for a loan to do development work at the Iron Blossom Mine.

In the year 1958, we drifted 600 feet, sunk a winze 60 feet, raised 100 feet and renovated 400 feet of drift that was too small to get the mucking machines and equipment through. We shipped $15,000.00 worth of ore after freight and smelting charges. In the development work we have completed, we have encountered some very promising fissures which have possibilities of some large ore bodies.

The Iron Blossom Mine first produced ore in 1908. By the year 1914, they had produced $11,000,000.00. From 1914, to the year 1928, they produced several million more. We feel certain that in all the virgin ground left we will be successful in finding more large ore bodies.

I will need $15,000.00 and have the following items for security.

	Value
1 - Ingersoll Rand Compressor 315 C.F.M.	$ 3,000.00
1 - G.M.C. 165 H.P. Diesel Motor	4,000.00
1 - Air Powered Hoist	1,200.00
1 - 1952 Ford Pickup Truck	600.00
2 - Rockdrills with Jackleg	900.00
2 - Single Drum Tuggers	700.00
2 - 4' X 12' Air Receivers	800.00
Home in Eureka, Utah	4,000.00
Total	$15,000.00

We are shipping some ore at the present time. The last settlement, after smelter treatment, was $20.62 per ton, $88.20 per ton, and $18.08 per ton. We have the mine leased from Tintic Standard. We pay from 10% to 25% royalty to them and would like to pay the loan at the same royalty basis to you.

Very truly yours,

Glen L. Larsen

H.A.C.
HOME ACCEPTANCE CORPORATION
H. A. COMPANY
FR 4-0814 282 UNIVERSITY STREET PROVO, UTAH

February

OFFICIAL FILE COPY
O. M. E.
RECEIVED MAR 2 1959

DATE	INITIALS	CODE

Mr. Glen L. Larsen
Eureka, Utah

Dear Mr. Larsen:

I have considered your request for a loan of $15,000.00 this date and I am indeed sorry that we will be unable to be of service to you at this time. We appreciate very much, the business that you have given us over the past several years and the excellent manner in which you have always met your obligations to us. We shall always look forward with pleasure, to doing business with you if the request for credits are such that we would be permitted to extend to you.

We are limited in loan amounts to $5,000.00. Also we are required to have all repayments made in monthly installments and the length of time cannot exceed thirty-six months. Also mining equipment is not one of the usual types of collateral that we use. Therefore, we feel that the amount that we would be able to extend to you at this time and the terms at which we would be required to make it, would be limited to such an extent as to be of little value to you.

Yours very truly,

H. A. COMPANY

By Lynn R. LeVitre

Lynn R. LeVitre, Mgr.

LRL:rj

OFFICIAL FILE COPY
O. M. E.
RECEIVED MAR 2 1959
DATE | INITIALS

February 17, 1959
Eureka, Utah

H. A. COMPANY
252 North University Avenue
Provo, Utah

I would like to apply for a loan to do development work at the Iron Blossom Mine. The two previous loans you made to me were used to development during 1958.

In the year 1958, we drifted 600 feet, sunk a winze 60 feet, raised 100 feet and renovated 400 feet of drift that was too small to get the mulking machines and equipment through. We shipped $15,000.00 worth of ore after freight and smelting charges. In the development work we have completed, we have encountered some very promising fisures which have possibilities of some large ore bodies.

The Iron Blossom Mine first produced ore in 1908. By the year 1914, they had produced $11,000,000.00. From 1914, to the year 1928, they produced several million more. We feel certain that in all the virgin ground left we will be successful in finding more large ore bodies.

I will need $15,000.00 and have the following items for security.

	VALUE
1- Ingersoll Rand Compressor 315 C. F. M.	$3,000.00
1- G. M. C. 165 HP Diesel Motor	4,000.00
1- Air Powered Hoist	1,200.00
1- 1952 Ford Pickup Truck	600.00
2- Rockdrills with Jackleg	900.00
2- Single Drum Triggers	700.00
2- 4' X 12' Air Receiver	800.00
Home in Eureka, Utah	4,000.00
Total	15,000.00

We are shipping some ore at the present time . The last settlement, after smelter treatment, was $20.62 per ton, $88.20 per ton, $18.08 per ton. We have the mine leased from Tinctic Standard. We pay from 10% to 25% royalty to them and would like to pay the loan at the same royalty basis to you.

Glen S Larsen

KAMAS STATE BANK

Kamas, Utah,

OFFICIAL FILE COPY
O. M. E.
RECEIVED MAR 2 1959

DATE	INITIALS	

February 18th, 1959

Mr Glen L. Larsen
Eureka, Utah

Dear Mr Larsen:

Your application for a loan of $15,000.00 at our bank to do development work on your lease from the Tintic Standard Mining Company, has been presented to our loan committee and they feel that this isn't a proper loan for the bank to carry and we are sorry that we will be unable to take care of you at this time.

Our experience with you in the loans we have carriedfor you have been handled very satisfactorily, and we hope that you can secure these funds elswhere.

Respectfully

Moses C. Taylor

Moses C. Taylor, Pres.

OFFICIAL FILE COPY
O. M. E.
RECEIVED MAR 2 1959

DATE	INITIALS	CODE

February 17, 1959
Eureka, Utah

Morse State Bank
Morse, Utah

I would like to apply for a loan to do development work at the Iron Blossom Mine. The two previous loans you made to me were used to do development during 1958.

In the year 1958, we drifted 600 feet, sunk a winze 60 feet, raised 100 feet and renovated 400 feet of drift that was too small to get the mucking machines and equipment through. We shipped $15,000.00 worth of ore after freight and smelting charges. In the development work we have completed, we have encountered some very promising fissures which have possibilities of some large ore bodies.

The Iron Blossom Mine first produced ore in 1906. By the year 1914, they had produced $11,000,000.00. From 1914, to the year 1920, they produced several million more. We feel certain that in all the virgin ground left we will be successful in finding some large ore bodies.

I will need $15,000.00 and have the following items for security.

	VALUE
1- Ingersoll Rand Compressor 315 C. F. M.	$3,000.00
1- C. M. C. 165 HP Diesel Motor	4,000.00
1- Air Powered Hoist	1,200.00
1- 1952 Ford Pickup Truck	600.00
2- Rockdrills with Jackleg	900.00
2- Single Drum Skippers	700.00
2- 4' X 12' Air Receivers	500.00
Mine in Eureka, Utah	4,000.00
Total	15,000.00

We are shipping some ore at the present time. The last settlement, after smelter treatment, was $20.62 per ton, $25.20 per ton, and $15.05 per ton. We have the mine leased from Pinetic Standard. We pay from 10% to 25% royalty to them and would like to pay the loan at the same basis to you.

Glen L Larsen

OFFICIAL FILE COPY
O. M. E.
RECEIVED MAR 2 1959

DATE	INITIALS	CODE

LEASE AND AGREEMENT

THIS LEASE AND AGREEMENT, made and entered into this 1st day of April 1958 by and between TINTIC STANDARD MINING COMPANY a corporation of the State of Utah, hereinafter termed the Lessor, and GLEN LARSEN hereinafter termed Lessee;

W I T N E S S E T H :

That the Lessor, for and in consideration of the rentals and royalties hereinafter required to be paid and of the covenants to be performed and kept by the Lessee, hereby leases and lets unto the Lessee, all that portion of the mining property of the Lessor, situated in Tintic Mining District, Juab County, State of Utah, embraced within the patented lode mining claims listed below:

Lot No. 115 Iron Blossom lode.
Survey No. 4548 Una lode
" " 5171 Excelsior lode
" " 5171 Little Chief lode
" " 5171 Mild Winter lode
" " 5171 Little Giant lode (limited to that portion which lies southerly of a straight line drawn from Corner No. 2 to Corner No. 5 of said Little Giant lode, said line having a course and distance of South 67 degrees 17 minutes East 599.1 feet.)

The exterior boundary of the above described tract is as follows (see Lessor's map No. 8-2, hereto attached):

Beginning at Corner No. 3, Survey No. 4548, Una lode, and running thence

S. 40° 05' W. 1,208.8 feet to Corner No. 4 of said Una lode, thence

S. 31° 17' W. 152.4 feet to Corner No. 5 of said Una lode, thence

N. 63° 45' W. 266.8 feet to the point of intersection with line 6-5, Survey No. 4519, March lode, thence along said line 6-5 of said March lode, thence

N. 47° 42' W. 125.2 feet to Corner No. 5 of said March lode, on line 1-4, Survey No. 4519, Eastern lode, thence

N. 36° 17' E. 140.0 feet to Corner No. 4 of said Eastern lode, thence

N. 47° 42' W. 200.0 feet to Corner No. 3 of said Eastern lode, identical with Corner No. 5, Survey No. 4519, Turk lode, and with Corner No. 1, Survey No. 5171, Little Chief lode, thence

N. 47° 42' W. 200.0 feet to Corner No. 4 of said Turk lode, on line 4-1 of Lot No. 85 Governor lode, thence

N. 37° 50' E. 52 feet, more or less, to Corner No. 1 of said Governor lode, thence

N. 49° 00' W. 200.0 feet to Corner No. 2 of said Governor lode, thence

S. 37° 50' W. 599.9 feet to the point of intersection with line 1-2 of said Little Chief lode, thence

S. 75° 39' W. 173.6 feet to Corner No. 2 of said Little Chief lode, on line 4-3, Lot No. 115, Iron Blossom lode, thence

S. 40° 15' W. 123.0 feet, more or less, to Corner No. 4 of said Iron Blossom lode, thence

N. 63° 50' W. 190.0 feet, more or less, to Corner No. 1 of said Iron Blossom lode, thence

N. 39° 36' E. 910.0 feet, more or less, to Corner No. 1, Survey No. 5171, Mild Winter lode, thence

N. 39° 27' W. 39.9 feet to Corner No. 2 of said Mild Winter lode, thence

N. 13° 28' E. 882.6 feet to Corner No. 3 of said Mild Winter lode, thence

S. 80° 51' E. 138.2 feet to Corner No. 4 of said Mild Winter lode, identical with Corner No. 5, Lot No. 244 Wolf lode, thence

N. 36° 40' E. 577.0 feet to Corner No. 5 of said Mild Winter lode, identical with Corner No. 6 of said Wolf lode and with Corner No. 2, Survey No. 5472 Hemitite lode, thence

S. 39° 27' E. 452.5 feet to Corner No. 6 of said Mild Winter lode, identical with Corner No. 1 of said Hemitite lode and with Corner No. 3, Survey No. 5171 Excelsior lode, thence

S. 63° 50' E. 6.2 feet to the point of intersection with line 3-4 of Lot No. 122 La Bonta lode, thence

S. 18° 35' W. 92.6 feet to Corner No. 4 of said La Bonta lode, thence

S. 89° 43' E. 210.6 feet to Corner No. 5 of said La Bonta lode, identical with Corner No. 4 of said Excelsior lode and with Corner No. 2, Survey No. 5171 Little Giant lode, thence

S. 67° 17' E. 599.1 feet to Corner No. 5 of said Little Giant lode, thence

N. 75° 39' E. 154.4 feet to Corner No. 5 of said Little Chief lode, thence

S. 49° 15' W. 608.9 feet to the point of intersection with line 2-3 of said Una lode, thence

S. 63° 45' E. 384.6 feet to Corner No. 3 of said Una lode, the point of beginning.

That the term of this lease shall be a period of two years, commencing at noon April 1, 1958 and ending at noon on April 1, 1960 provided, however, that this lease and agreement shall remain in effect for successive and consecutive periods of one year each, unless terminated by reason of default on the part of the Lessee, or unless terminated at the end of the original term or at the end of any successive one-year period thereafter, by either the Lessor or the Lessee, by written notice by either to the other given at least fifteen days prior to the end of the said term or to the end of any successive one-year period, as the case may be.

That the purpose of this lease and agreement is the mining and marketing or ores from the leased premises described above.

That the Lessor has executed a Consent to Lien and Subordination Agreement (Form MF-205) in favor of the United States of America in order that the Lessee may fulfill requirements for an Application for Aid in an Exploration Contract (Form MF-103.)

IN CONSIDERATION OF said demise, the said Lessee covenants and agrees with the Lessor as follows:

1. That the Lessee is an independent contractor and there shall be no privity of contract between the Lessor and the employees of the Lessee, but all such employees, whether on a wage or profit-sharing basis shall be selected by the Lessee, discharged by the Lessee, directed by the Lessee, and paid by the Lessee; and that subject only to the specific limitations herein set out, the Lessee shall have exclusive dominion and control of the leased property and of the operations therein during the term of this lease.

2. That the Lessee shall enter upon said leased premises during every month of the term hereof and cause the same to be worked with reasonable diligence (by the term "reasonable diligence" as used herein, the parties agree that sixty man-shifts of work per month shall constitute prima facie evidence of such reasonable diligence); that they will cause all work in said demised premises to be performed in a safe and miner-like manner in accordance with the mining laws of the State of

Utah, and with such rules and regulations as may have been or may be issued by the Industrial Commission of Utah or by the State Metal Mine Inspector. All mine openings necessary to the work hereunder to be performed and all mine openings necessary for ingress to or egress from the demised premises shall be maintained in accordance with standards established by the above mentioned rules and regulations and that such openings shall be kept clear of waste rock, rubbish or other obstruction unless prevented by extraordinary mining casualty. Openings from which ore has been removed shall be back-filled with waste rock if necessary for safe and economical mining practice to prevent the caving of walls or ore in place.

3. That the Lessee shall permit the Lessor to deduct from the proceeds of settlements on ores mined and shipped by the Lessee the amount of all occupation, net proceeds and other taxes accruing on account of or chargeable upon the operations conducted by the Lessee on the leased property. That because of the practical impossibility of determining in advance the amount to be deducted to cover such net proceeds taxes, it is hereby agreed that the Lessor may deduct from the proceeds of settlements on ores and retain, without obligation to account further to the Lessee therefor, as in full settlement of any obligation of the Lessee with respect to such net proceeds taxes, a sum equal to the amount of such taxes at the rate levied by the county for the preceding year, based on or measured by net proceeds equal to the net proceeds of said Lessee and without regard to any other operations in said mine.

4. That the Lessee shall, at Lessee's own expense, carry Workmen's Compensation Insurance and Occupational Disease Compensation Insurance covering all of Lessee's employees and that the Lessee shall pay any taxes, and/or make any deductions under the Federal Social Security Act, and/or Utah Employment Security Act for which the Lessee may become obligated, and shall comply with all other laws, rules and regulations of any governmental authority affecting the Lessee's operations on said demised premises and shall supply the Lessor with supporting evidence of such compliance.

5. That there shall be reserved to the Lessor the right of entry into said property for the purpose of inspection of the workings, for surveying and sampling, and for checking on compliance with safety rules and regulations.

6. That the Lessee shall pay any loss or expense resulting from any shipment of ores, the proceeds from which are insufficient to meet all freight, smelter and other costs and charges in connection therewith.

7. That the Lessee shall forthwith post and thereafter keep posted in conspicuous places on the demised premises as many written notices as may be necessary to adequately notify all persons who may come within or upon the said demised premises, that the same are held by the Lessee under lease from the Lessor, and the Lessee and not the Lessor is liable for all labor performed and supplies and/or materials used by the Lessee in and upon the demised premises, and that the Lessee and not the Lessor shall be responsible for all debts and expenses incurred in mining operations in or upon the demised premises.

8. That the Lessee shall hold the Lessor harmless and shall fully indemnify the Lessor against all claims and demands of any kind and nature which may be made upon the Lessor or against the demised premises for or on account of any debts or expenses contracted or incurred by the Lessee as well as from and against all acts, transactions, or omissions by the Lessee, his agents and servants, including claims, demands, causes of action, costs and expenses, arising during the continuance of this lease agreement, from or on account of injury to any person, whether occasioned by any unsafe or dangerous condition of any part of the demised premises or any workings thereon or therein used by the Lessee, or otherwise, and shall defend the Lessor at his own cost and expense from any such liability or asserted liability.

9. That the Lessee shall not assign or sub-let this lease, or any interest therein, or the premises affected thereby, or in any portion thereof, without the written consent of the Lessor nor allow any person not in privity with the parties hereto to take or hold said premises, or any part thereof, under any pretense whatsoever.

10. That the Lessee shall deliver to the Lessor the said premises with appurtenances and improvements, in good order and condition, with all shafts, tunnels, levels and other permanent workings thoroughly clear of waste, rubbish and water and ready for immediate working, accidents not arising from negligence alone excepted, without demand or further notice on the last day of the term, or any extension of term hereof, or at any time previous thereto, upon demand for forfeiture; provided, that the Lessee shall have thirty days from and after the date of any such termination in which to remove all broken ore from the property for shipment under the terms of this agreement; and Lessee shall have the right during such interim, to remove from the said premises all tools, equipment and supplies owned by the Lessee.

11. That all ores produced by the Lessee shall be shipped in the name of the Lessor for the account of the Lessee, and the Lessor is hereby given a lien upon all ores extracted from the premises during the term of this lease and agreement to secure to the Lessor any and all sums due or owing by the Lessee, and from the net smelter or mill returns the Lessor shall make all deductions for any advances or any money, materials and/or supplies furnished, for taxes, rentals, royalties and all other proper charges, paying over to the Lessee any remaining balances of net smelter or mill returns within ten days from the receipt thereof.

That the Lessee shall have access to all original records of mine, mill and smelter returns to enable him to check such receipts, deductions and payments. The Lessee shall have the right to be present or be represented at the sampling of any ores shipped by him should he so desire. The Lessee shall pay the cost of assaying mine samples and settlement control samples, and also the cost of any surveys desired by him. The Lessor shall not be liable for ores lost by theft, accident, or financial difficulties of the ore buyer not arising from its negligence, nor shall the Lessor collect any royalties on ores so lost.

12. That, should the Lessee participate with the United States of America in an Exploration Project Contract, there shall first be paid to the United States of America out of the proceeds from sale of any ores mined as a result of the exploration carried out under provisions of said contract, its royalty as specified in the terms of said contract.

That from the remainder of all proceeds, after royalty shall have been paid to the United States of America, there shall be paid to the Lessor, as rental for property leased to him, a royalty equal to a percentage of the "net smelter value receivable" from the ore buyer on all ores marketed, as set forth in the Royalty Schedule below. That the term "net smelter value receivable" shall be, and is herein understood to mean the net sum of money receivable from the ore buyer in settlement of a shipment hereunder, after all deductions for treatment, freight charges, and taxes thereon for which the ore buyer is liable, shall have been made.

That the Lessee agrees, in the event any subsidy shall be paid to the Lessee by the United States Government or any agency thereof during the term of this agreement on the metal content of the ores mined from the leased premises, an additional rate of royalty shall be applied to such subsidy payments, based on the Royalty Schedule below, if and to the extent that Government regulations permit.

ROYALTY SCHEDULE

On all ores having a "net smelter value" per dry ton of not more than $12.50, a royalty of 10%. On all ores having a "net smelter value" per dry ton in excess of $12.50, the royalty to increase above 10% at the rate of 1% for each $1.00 increase in "net smelter value" per dry ton, fractions in proportion calculated to the nearest $0.01 per ton, to a maximum royalty of 25%.

13. That the Lessee shall furnish at his sole expense all operating supplies, materials and equipment required in the performance of work under this agreement, but the Lessee may purchase from the Lessor, at Lessor's option, such

supplies, materials and equipment as the Lessor may have on hand and available for sale.

That the cost of re-opening and maintaining mine workings necessary to the operations under this agreement shall be at the sole expense of the Lessee.

14. Upon violation by the Lessee of any of the covenants of this agreement, the term of the agreement shall, at the option of the Lessor, terminate and expire and the lease and leasehold rights of the Lessee in the demised premises shall be forfeited if such fault or violation shall continue at the expiration of ten days next after the Lessor shall have given the Lessee written notice of such violation or default and demand for possession of the leased premises because thereof, the Lessee being given said ten days time to overcome the cause of such forfeiture in full compliance with the violated covenants, and if such cause be not so overcome, at the expiration of said ten days time, without further demand or notice the Lessor, by its agents or attorneys, may enter upon the leased premises and dispossess all persons occupying the same. In the event the Lessee deny that a violation had occured or that a default existed, of which notice had been so given he may, not more than five days after receipt of said notice, serve written demand upon the Lessor for submission of such disagreement to arbitration. Thereupon the Lessor and the Lessee each, within five days from the making of said demand, shall appoint an arbiter and if the two so appointed do not agree within five days, such arbiters shall promptly select a third. The decision of any two such arbiters in agreement shall be rendered within ten days of the selection of the third one and shall be conclusive and binding upon the Lessor and the Lessee as to the fact of the occurrence or non-occurrence of such claimed violation or default, except as provided in paragraph 15 below. Any expense incurred in said arbitration shall be borne by the party found to be at fault by the arbiters.

15. That all operations shall be conducted in a safe and prudent manner and it is agreed that, should any dispute arise between the Lessor and the Lessee regarding the conduct of operations in a safe and prudent manner, such dispute shall be referred to the State Mine Inspector for decision, such decision to be final and binding upon both parties.

16. That this agreement applies only to the ore bodies, veins or ledges within the property owned or controlled by the Lessor and in no event or circumstances shall the Lessor be held liable if the Lessee's operations continue beyond the outside boundaries of the demised premises herein described.

17. That no officeror employee of the Lessor shall have an interest in or participate in the profits derived from this lease.

18. That no provision contained in this agreement shall be construed to require the Lessor to continue its operations or to continue to make available to the Lessee any equipment, materials, services or supplies if, to do so, would result in financial loss to the Lessor, and that operations may be suspended by either party to this agreement due to causes beyond the control of such party, such as acts of god, fire, destruction of mine, strikes, riots, unavailability of labor, materials, or supplies, or unfavorable prices of metals produced hereunder.

19. That any written notice or demand to be given under the terms hereof may be given by mail and will be deemed served if and when mailed in the State of Utah if given by Lessor, addressed to Lessee at Eureka, Utah, and if given by Lessee, addressed to Lessor, 1114 Walker Bank Building, Salt Lake City, Utah.

20. That this lease and agreement shall be binding upon and inure to the benefit of the successors and assigns of the Lessor, and of the heirs, executors, administrators, personal representatives and consent assigns of the Lessee.

21. That this Lease and Agreement supercedes and replaces a similar Lease and Agreement dated March 1, 1954, by and between the parties hereto, and

that the said former agreement is hereby cancelled and rendered null and void.

IN WITNESS WHEREOF, the said Lessor has caused this document to be signed by its authorized officers and the said Lessee has set its signature on the date first above written.

Lessor TINTIC STANDARD MINING COMPANY

By M. D. Paine
M. D. Paine, Treasurer

WITNESS:

Lessee

WITNESS:

Extension of Term of Lease and Agreement
dated April 1, 1958 by and between
Tintic Standard Mining Company, of Salt Lake City, Utah
and Glen Larsen of Eureka, Utah

It is mutually understood and agreed by and between the parties hereto that the term of this Lease and Agreement is hereby extended beyond its terminal date of April 1, 1960, for an additional year; namely, to end at noon on April 1, 1961, without change in any of the other provisions of said agreement.

Lessor TINTIC STANDARD MINING COMPANY

Date April 19, 1959

By M. D. Paine
M. D. Paine, Treasurer

WITNESS:

Lessee Glen Larsen
Glen Larsen

DOCKET COPY

Project Summary Report

By: J. W. Alt February 15, 1960

1. Docket No. OME-6015 (Lead-Copper)
   Contract No. 2003

   Operator: Glen Larsen, an individual
   Eureka, Utah

   Property: Iron Blossom Mine
   Juab County, Utah

   Operator's Property Rights - Lessee

   Lease and Agreement, Tintic Standard Mining Company, dated April 1, 1958.

   Lien and Subordination Agreements, dated February 20, 1959

2. Contract, Form MME 51 (Feb. 1959), dated June 16, 1959.

   Work to start on or before June 16, 1959. Work to be completed within 14 months.

   Work Authorized:

Description of the Work

The purpose of the project is to explore for lead-copper ores. The work is divided into two stages. The Operator shall perform Stage I, and shall perform as much of the Stage II work as the Government approves in advance.

Stage I

1. Drift a maximum of 360 feet northerly on the 300 level to explore the Muhlstein fissure.
2. Drift a maximum of 80 feet southerly on the 300 level from a point 80 feet south of Muhlstein stope.
3. Timber not in excess of 50 feet of the drifts.
4. Not in excess of 30 samples shall be assayed for lead, copper, zinc, silver, and gold.

2. Contract (Work Authorized) continued:

Stage II

1. Deepen the Larsen winze an additional 105 feet.
2. On the 400 level, crosscut approximately 200 feet northwesterly to Muhlstein fissure.
3. Drift a maximum of 300 feet northerly and southerly along the Muhlstein fissure from the crosscut.
4. Timber not in excess of 64 feet of drifts or crosscut.
5. Not in excess of 30 samples shall be assayed for lead, copper, zinc, silver, and gold.

Estimated Costs of the Project

Fixed Unit Costs

Stage I

Drifting on 300 level, 440 feet @ $35.00/ft.	$15,400.00	
Timbering drifts, 50 feet @ $7.50/ft.	375.00	
Assaying 30 samples @ $5.00 each	150.00	$15,925.00

Stage II

Sinking Larsen winze, 150 feet @ $94.00/ft.	$9,870.00	
Crosscutting on 400 level, 200 feet @ $35.00/ft.	7,000.00	
Drifting on 400 level, 300 feet @ $35.00/ft.	10,500.00	
Timbering drifts and crosscuts, 64 feet @ $7.50/ft.	480.00	
Assaying 30 samples @ $5.00 each	150.00	$28,000.00

Estimated Total Cost of the Project (rounded to)	$43,926.00
Government's Participation at 50%	$21,963.00

Amendments

No. 1 - Agreed July 14, 1959. In Exhibit "A," Description of Work, add a paragraph 5. Pertains to sampling and to samples.

2. Contract (continued)

Work Completed

Stage I

Drifting, 405 feet @ $35.00/ft.	$14,175.00
Timbering, 9 feet @ $7.50/ft.	67.50
Assaying, 15 samples	75.00
Total Cost of the Project	$14,317.50

The work under Stage II was not approved by the Field Team; therefore, no work was done under this stage.

Final Reports

Operator's final report, dated December 26, 1959, received January 4, 1960.
Field Team's final report, dated January 26, 1960, received February 1, 1960.

Work on the project under the terms of the contract began July 2, 1959, and the work under Stage I was completed in late September 1959. Results of Stage I work were virtually negative and the contract, therefore, was considered terminated upon completion of this stage.

3. Audit Report of Review, made in lieu of final audit, dated January 15, 1960.

Total cost billed by Operator	$14,332.50
Exceptions	15.00
Total Acceptable Cost	$14,317.00
Government Participation @ 50%	$ 7,158.50

4. Certification of discovery - none issued.

5. Comments -

The results of the work completed under Stage I of the contract were so unfavorable that further exploration of the property, as provided under Stage II of the contract, was not considered warranted. Therefore, the contract was considered completed upon the completion of work under Stage I.

5. Comments (continued) -

The Operator drifted northerly for a distance of 325 feet from the north edge of the Muhlstein stope exploring for and along the Muhlstein fissure. Occasional spots of high-grade mineralized material were found along the rhyolite-limestone contact with intersecting fissures or shears. The Muhlstein fissure as such was not penetrated, and the amount of mineralized material decreased as the drift progressed northward. what?

The drift to the south, 80 feet, followed a shear zone about 5 feet wide. No ore mineralization was noted in the shear zone that is filled mainly with manganese stained clay-like material and fragments of rhyolite and limestone.

The Operator, at his expense, drove a 30-foot crosscut from the project drift to test a favorable area. No zones of significant mineralization were encountered. The Operator states that he sunk 25 feet of winze at his sole expense.

The Field states that the exploration completed did not result in a discovery or development of a significant quantity of lead-zinc ores; therefore, certification of the project is not recommended.

Additional exploration work on this property with Government financial assistance is not warranted.

J. W. Alt

JWAlt/gla
2-17-60
cc to: Director's Reading File
Docket
Mr. Alt
Chron

MME Form 17
Mar. 59

OFFICE OF MINERALS EXPLORATION

WORK COMPLETED ANALYSIS

ND Certified — After final audit or review report is received, prepare in duplicate. File original in official docket. Send copy to Code 210.

Operator: Glen Larsen
Actual Cost:
State: Utah
Agreed Unit Cost: $43,926.00
Final Report of Audit:
Commodity: Lead-Copper
Docket No.: OME-6015
Final Report of Review: Jan. 15, 1960
Contract No.: 2003

Type of Work (Use these categories only)	Authorized by Contract and Amendments		Completed and Paid for		Net cost after sale of Gov't. Property
	Units	Cost 1/	Units	Cost 1/	
Stage I Drifting & Crosscutting On 300 Level	440'	$15,400.00	405'	$14,175.00	
Stage II - Drifting on 400 Level	300'	10,500.00			
~~Raising~~ Crosscutting on 400 Level	200'	7,000.00			
~~Shafts~~ Timbering. Stage I	50'	375.00	9'	67.50	
Stage II	64'	480.00			
Winzes Stage II - 300 Level to 400 Level	105'	9,870.00			
Drilling (Specify)					
Surface Excavation					
Underground Excavation					
Roads and Trails					
Operating Equipment Purchased					
Surface Rehabilitation & Repairs					
Underground Rehabilitation					
New Building, Improvements, etc.					
Other (Specify) Assaying Stage I - 30 samples		150.00			
Stage II - 30 samples		150.00			
Totals (rounded to)		$43,926.00		$14,317.50	2/

1/ Round off to dollars.
2/ Net cost total must agree with final report of audit or review.

Prepared by J. W. Ald Date 2/15/60

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M. E.		
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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

February 8, 1960

Re: Docket No. OME 6015 (Lead-Copper)
Contract No. 2003
Glen Larsen (Iron Blossom Mine)
Juab County, Utah

Memorandum

To: W. R. Griswold, Office of Mineral Exploration

From: G. Richards Gwinn, Bureau of Mines

Subject: Review of final field summary report.

In view of the negative results obtained from stage I of the subject contract, the OME field team has recommended termination of the contract and that no certification of discovery be issued.

Inasmuch as the work completed in stage I did not result in the development ? of a significant quantity of lead-zinc ore, I concur with the OME Field Team Recommendations.

G. Richards Gwinn

G. Richards Gwinn

Copy to Division of Minerals (2)
Branch of Base Metals (2)
H. Kirkemo
F I L E S

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
Building 20 - Federal Center
Denver 25, Colorado
January 28, 1960

OFFICIAL FILE COPY
O. M. E.
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2-1	JHB	130
"	KJ	110
2-5	JHB	130
2-8	aet	220

Memorandum

TO: Chairman, Operating Committee, OME

From: OME Field Team, Region III

Subject: Docket No. OME 6015 (Lead-Copper) Contract No. 2003
Glen Larsen (Iron Blossom mine) Juab County, Utah -
FINAL SUMMARY REPORT

Enclosed are the original and two copies of a Final Joint Engineering and Geologic Report dated January 26, 1960, by T. M. Romslo, Mining Engineer, Bureau of Mines, and J. W. Hasler, Geologist, Geological Survey, also member of OME Field Team, Region III, pertaining to work completed under the subject contract. The original and one copy of the final report submitted by the Operator was forwarded by memorandum of December 31, 1959.

Final payment to the Operator was processed by this office January 19, 1960 in conformance with the Report of Review of reported project costs by the Contract Administration and Audit Division, OME dated January 15, 1960.

The results of the work completed under Stage I of the contract were so unfavorable that further exploration of the property as provided for under Stage II of the contract was not considered warranted; therefore, the contract was considered completed upon completion of the work under Stage I during the month of September 1959. The Operator was so advised by letter from this office dated January 12, 1960.

The accepted exploration work completed under Stage I of the contract consisted of 405 ft. of drifting, 9 ft. of drift timber, and analyses of 15 samples, all at a total accepted cost of $14,317.50, toward which the Government contributed 50 percent or $7,158.75.

The exploration work completed did not result in the discovery or development of a significant quantity of lead-zinc ore; therefore certification of the project is not recommended.

J. W. Townsend
Executive Officer

FINAL F.T. REPORT

Reviewed by
OME OPERATING COMMITTEE
2-5-60
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
FRED A. SEATON, SECRETARY

OFFICE OF MINERALS EXPLORATION
REGION III

OFFICIAL FILE COPY
O. M. E.
RECEIVED FEB 1 1960

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OME 6015

Contract No. [redacted]2003

Glen Larsen

Iron Blossom mine

Juab County, Utah

Lead-Copper

Final
Joint Engineering and Geologic Report

by

T. M. Romslo, Mining Engineer
Bureau of Mines

J. W. Hasler, Geologist
Geological Survey

January 26, 1960

Reviewed by
OME OPERATING COMMITTEE
2-5-60
(date)

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Proposed and recommended exploration	5
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Conclusions and recommendations	11

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1.	OME Docket No. 6015, Formerly DMEA Docket No. 5004, Location map, Glen Larsen, Iron Blossom No. 1 Mine, Tintic Standard Mining Co., Juab County, Utah	1
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OME 6015

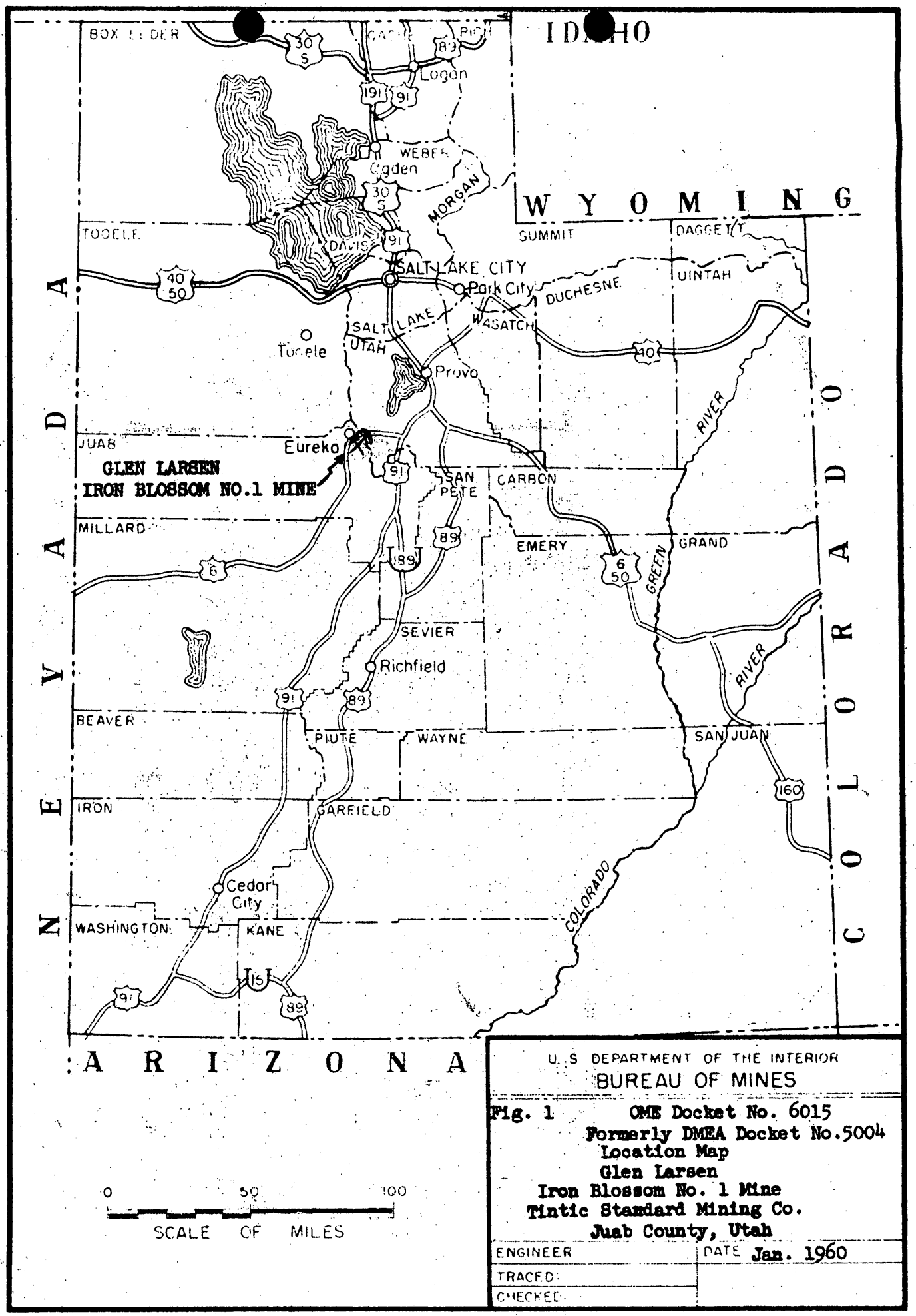
GLEN LARSEN
IRON BLOSSOM MINE
JUAB COUNTY, UTAH

INTRODUCTION AND SUMMARY

The Iron Blossom mine in Juab County, Utah, was explored for lead and copper by Glen Larsen, lessee, with Governmental assistance during 1959(fig. 1).

Glen Larsen's first application for aid, Docket No. DMEA 5004, which was made early in 1958, was denied because the proposed work was in an inaccessible area where reliable geological information was not available and because it appeared to comprise clean-up work and extension of known ore bodies. In early 1959, he again applied for aid after reopening old workings, driving about 500 feet of drifts, crosscuts, raises, and winzes, and producing about 1,300 tons of ore. A field examination of the property under Docket OME 6015 was made April 8, 1959, by F. B. Moore, Geological Survey, and M. H. Howes, Bureau of Mines. Contract No. [redacted] 2003, which was executed as a result of the examining team's favorable findings, authorized a two-stage exploration project. The Government's participation was a maximum of 50 percent of the estimated total cost of $43,926.00, or $21,963.00.

Stage I work began July 2, 1959, and was completed in late September 1959. Results of Stage I work were virtually negative, and the contract was therefore considered terminated upon completion of Stage I. The



U.S DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Fig. 1 OME Docket No. 6015
Formerly DMEA Docket No.5004
Location Map
Glen Larsen
Iron Blossom No. 1 Mine
Tintic Standard Mining Co.
Juab County, Utah

ENGINEER	DATE Jan. 1960
TRACED:	
CHECKED:	

total approved cost of the project amounts to $14,317.50.

Certification of the project as a discovery is not recommended.

GEOLOGY

The Tintic mining district is underlain by sedimentary rocks at least 13,000 feet thick which range in age from Cambrian to Mississippian, and by volcanic rocks of Tertiary (?) age.

The igneous rocks are mostly effusive and include rhyolite, monzonite, latite, and andesite. Monzonite or monzonite porphyry intrudes the sediments as small stocks and dikes.

The sedimentary rocks at Tintic are folded into a large asymmetric syncline which has a steep west limb and a more gently dipping east limb. The axis of the syncline trends northerly and passes through the eastern part of the district in the vicinity of the Iron Blossom No. 1 mine.

Faulting is extensive but too complicated to allow for simple generalization. Faults of east trend appear most numerous; large faults of northeast trend are prominent; and faults of northerly trend are known in underground workings but, being parallel to the beds, are obscure at the surface.

ORE DEPOSITS

The Tintic ore deposits occur in both igneous and sedimentary rocks; however, most of the production of the district has come from limestone beds. The ore bodies lie along fissure zones but form bedded replacement deposits in the limestone. The igneous rocks contain northeasterly veins, of steep dip, "some of which have yielded considerable amounts of ore from their oxidized zones above the water table." Of the limestone beds, the Bluebell dolomite is the most favorable host rock; it contains large ore bodies in many places throughout the district. Considerable quantities of ore have been produced from other limestone beds in limited areas as follows: (1) Pine Canyon limestone in the eastern part of the district; (2) Opex dolomite and Ajax limestone in the Bullion Beck group; (3) Gardner dolomite in the Southern Iron Blossom area; and (4) Opohonga limestone in the Grand Central mine. In the Iron Blossom No. 1 mine most of the ore occurs in the Bluebell dolomite.

Four vein zones, or "ore runs," of northerly trend are recognized in the limestones. From west to east they are: (1) Gemni; (2) Mammoth; (3) Godina; and (4) Iron Blossom. The Iron Blossom mine is in the southern part of the Iron Blossom zone which has been mined for a lateral distance of over 10,000 feet.

Most of the Iron Blossom No. 1 workings are inaccessible; therefore much of the following data is based on the operator's knowledge of the area or on Professional Paper 107. The Iron Blossom ore zone,

which contains bedded replacement ore bodies in and north of the Iron Blossom No. 3 mine, becomes more vein-like in character in the Iron Blossom No. 1 area. Still farther south in the area of the Governor and Dragon mines it is classed as a vein-type deposit by Lindgren. The operator reports that the zone contains four principal strands in the Iron Blossom No. 1 mine. From west to east they are: (1) a contact (No. 1 East) zone between rhyolite and limestone, which in 1958 was being mined on the 300 level; (2) the "East vein" of Lindgren, locally called the Gold fissure, which produced from the Gold stope; (3) the West or "main" vein which contains most of the stopes on the 500 and 600 levels; and (4) a zone at the contact of limestone with a porphyry dike. A fissure which lies between the East and West veins and which appears to be a split from the West vein was the target for the proposed exploration.

The contact ore body (No. 1 East) recently mined on and below the 300 level is irregular in form but generally is from 10 to 12 feet wide. The ore is highly oxidized and consists of a soft, cellular mass in which cerussite is the chief ore mineral. Silver is present in considerable amounts probably as secondary minerals or possibly carried by other minerals. The ore is heavily stained with limonite and, locally, with manganese oxide. Small amounts of pyrite are reported by the operator and traces of copper stain occur in places. The zinc content is low. Gangue minerals are quartz and barite.

The ore throughout the Iron Blossom zone is generally uniform in character although in places in the Iron Blossom No. 1 mine the copper-gold content is higher and the lead-silver content is lower than in mines farther north. The vein ore in mines to the south is less plentiful and of lower grade, indicating that the Iron Blossom No. 1 mine is in a transition zone. Shipments of ore made about 1927 may indicate the tenor to be expected in the areas proposed for exploration. Ore from the Layshon stope contained 90 to 213 ounces of silver per ton, 11 percent lead, and 0.35 ounce gold; ore from the Muhlstein stope contained 18 to 70 ounces of silver per ton, 1 to 11 percent copper, and up to 20 percent lead. The operator reports that the ore produced from the contact zone in the mine was valued at $2,000,000.

PROPOSED AND RECOMMENDED EXPLORATION

The five projects proposed by the applicant actually involved only two targets, one on the 400 level and one on the 300 level. The applicant's 400 level project was designed to undercut a known ore occurrence which had been explored by old workings on two or possibly three sides in addition to having been stoped to an unknown extent from a sub-level above the 400 level. The sub-level was reported by the operator to be at 340 feet or 60 feet above the 400 level. A composite plan map furnished by the applicant showed two stopes at different levels with a combined stoped area (in plan) of more than 100 square sets. The ore at Project 3 area is rather low-grade "mill dirt" occurring at the

contact of the Bluebell dolomite and rhyolite. The project (3) was considered mine development and consequently was not recommended by the examining team. The applicant's projects 1 and 2 involved gaining access to the 400 or project 3 level.

The applicant's 300 level projects 4 and 5 were both on the same fissure, called the Muhlstein fissure, for purposes of identification in this report. Project 4 comprised drifting 360 feet northerly from the north edge of the Muhlstein stope, and project 5 comprised drifting 80 feet (to within 100 feet of the property boundary) southerly from a point 80 feet south of the stope.

The Muhlstein fissure is accessible at three places: (1) at the starting point of project 4; (2) at the end point of project 4; and (3) at the starting point of project 5. The Muhlstein fissure is similar at all three places, and it consists of 3 to 6 feet of crushed rock and oxidized vein material. Manganese stain, copper stain, and vein quartz, all favorable indications of ore, are fairly conspicuous. The chief ore minerals are lead carbonate (cerussite) and secondary silver minerals. Moderate amounts of copper and, in places, gold are present.

The starting point of both the northerly and southerly drifts was in a highly mineralized area. In a distance of less than 100 feet east from the Muhlstein stope are two other stopes--the Muhlstein-Higgenson and the Gold--which are on parallel fissures or on splits from the Muhlstein or the East fissure. The ore bodies in this area form a

nearly vertical shoot in contrast to the horizontal (replacement type) shoots to the north. The primary control here appears to be the fissures although favorable limestone beds can increase the amount of fissure ore. The proposed drift was in the Bluebell dolomite, in favorable rock. At the north end of the project several small stopes marked the south end of a long horizontal ore shoot.

Although the Muhlstein fissure had been crosscut on the 200 and 400 levels, an unexplored block of ground 360 feet long by 200 feet high remained. Undiscovered ore bodies in the area may be either horizontal or vertical or they would be in the transition zone; if horizontal (replacement type), the 300 level appeared to be about the optimum level stratigraphically on which to explore the area; if vertical, the 200 and 400 level crosscuts would leave the fissure essentially unexplored. Except for the limited exploration in the Muhlstein stope area the Muhlstein fissure--apparently a split off the West fissure--had not been explored by drifting south of the point chosen for the north end of the project. It was therefore recommended that the applicant's request to drift northerly and southerly (projects 4 and 5) along the Muhlstein fissure from the Muhlstein stope area for a combined distance of 440 feet be approved.

Because of the possibility that significant quantities of ore-grade material might be discovered on the 300 level and further exploration on the 400 level warranted, a second stage of exploration was recommended, contingent upon the results of Stage I work, which required sinking the

Larsen winze an additional 105 feet, crosscutting on the 400 level for 200 feet northwesterly to the Muhlstein fissure, and drifting along the fissure both north and south for a total of 300 feet.

Contract [redacted]2003 was executed and work under the contract began on July 2, 1959, to complete the following exploration work (fig. 2):

Stage I

1. Drift a maximum of 360 feet northerly from the north edge of the Muhlstein stope to explore the Muhlstein fissure on the 300 level.
2. Drift a maximum of 80 feet southerly from a point 80 feet south of the Muhlstein stope to a point not closer than 100 feet from the property line. This drifting to be also along the Muhlstein fissure, on the 300 level.
3. Timber not in excess of 50 feet of the drifts.
4. Not in excess of 30 samples to be assayed for lead, copper, zinc, silver, and gold.
5. Drifts to be a minimum of 5 feet by 7 feet in cross section.

Stage II

(Contingent upon the results of Stage I work.)

1. Deepen the Larsen winze an additional 105 feet. This winze to be completely timbered, divided into two compartments with the cage compartment to be 4 feet by 4 feet inside of timber. The untimbered winze to be not less than 6 feet by 10 feet in cross section.

2. On the 400 level, crosscut approximately 200 feet northwesterly to the Muhlstein fissure.
3. Drift a maximum of 300 feet northerly and southerly along the Muhlstein fissure from the crosscut.
4. Timber not in excess of 64 feet of drifts or crosscut.
5. Not in excess of 30 samples to be assayed for lead, copper, zinc, silver, and gold.
6. Drifts and crosscuts to be a minimum of 5 feet by 7 feet in cross section.

WORK PERFORMED AND COSTS

Stage I

The operator drifted northerly for a distance of 325 feet from the north edge of the Muhlstein stope exploring for and along the Muhlstein fissure. Nine lineal feet of timber was installed at one place in the north drift.

Occasional spots of high grade mineralized material were found along the rhyolite-limestone contact with intersecting fissures or shears. The Muhlstein fissure as such was not penetrated, and the amount of mineralized material decreased as the drift progressed northward. The drift which was started July 2, 1959, was completed late in September 1959. Mineralized material encountered by the drift, as indicated by the assays of 15 samples (Table 1) is not of ore grade nor indicative of significant tonnage of potential ore.

Table 1.--Sample data

Sample No.	Width (in.)	Copper (percent)	Zinc (percent)	Lead (percent)	Gold (oz.)	Silver (oz.)
1	48	0.2	0.8	Tr.	Tr.	0.50
2	18	8.8	1.9	3.8	0.03	7.17
3	36	1.6	1.1	5.3	0.04	8.91
4	12	2.5	1.6	Tr.	0.03	16.87
5	30	0.1	0.8	Tr.	Tr.	0.20
6	24	0.1	0.9	Tr.	Tr.	0.45
7	18	0.1	0.8	Tr.	Tr.	0.25
8	24	0.1	1.3	0.8	Tr.	1.05
9	12	0.1	4.3	3.3	0.1	3.99
10	12	0.1	2.6	6.5	0.1	2.39
11	36	0.1	1.0	Tr.	0.2	2.83
12	14	0.1	8.0	11.8	0.4	4.36
13	12	0.1	0.8	0.4	Tr.	0.20
14	15	0.1	1.2	4.0	0.7	7.13
15	24	0.5	0.8	10.5	0.6	7.14

The contract was considered terminated upon completion of Stage I because results were unfavorable.

The allowed units of work performed and the approved costs are shown below.

Drifting,	405 feet @ $35.00/ft.	$14,175.00
Timber,	9 feet @ $7.50/ft.	67.50
Assaying,	15 samples @ $5.00/ea.	75.00
	Total approved costs	$14,317.50
	Government's share @ 50%	$ 7,158.75
	Paid to date	$ 6,838.75
	Balance due operator pending resolution of matters pertaining to closing the account	$ 300.00

CONCLUSIONS AND RECOMMENDATIONS

There was very little ore-grade material discovered as a result of Stage I work under OME Contract [redacted] 2003, and no further participation in exploration by the Government is warranted. It is therefore recommended that the contract be terminated and that no discovery or development be certified.

Official
~~EXTRA~~ COPY
O. M. E
RECEIVED JAN 22 1960

DATE	INITIALS	CODE
1/22	alf	500

Building 20 - Federal Center
Denver 25, Colorado
January 19, 1960

Mr. Glen Larsen
Eureka
Utah

Re: Docket OME 6015 (Lead-Copper)
Contract No. 2003
Glen Larsen
(Iron Blossom mine)
Juab County, Utah

Dear Mr. Larsen:

Enclosed for your records is a copy of Report of Review pertaining to costs of work reported under the referenced contract.

The balance due you of $300 will be placed in line for payment, which you should receive in approximately one week.

Very truly yours,

Original signed by

J. W. Townsend
Executive Officer, OME
Field Team, Region III

JWT:ltm

cc: Chmn. Op. Comm. (2)
Cont. Admin. & Aud. Div.
Finance Off. Reg. III
Corres.
Susp.
Chron.

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
1-15	gad	220
1/18	aet	500

JAN 15 1960

Memorandum

To: Executive Officer, OME Field Team, Region III

From: E. D. Talbert, Acting Chief (Signed) E. D. Talbert
Contract Administration and Audit Division

Subject: Docket No. OME-6015 (Lead-Copper)
Glen Larsen
Iron Blossom Mine
Juab County, Utah
Contract No. 2003

As requested by your January 12 memorandum the subject project has been reviewed and a Report of Review, in lieu of a final audit, has been prepared. The original and three copies are attached.

If you concur with the facts as stated in this Report of Review, please forward the original and one copy to the regional finance office, submit one copy to the Operator, and retain one copy in your files. If for any reason you do not concur, please return the original and all copies with your comments to this Division.

Attachments

EDTalbert/ama
January 15, 1960

Copy to: Docket
Director's Reading File
CA & A Division
Mr. T. A. Christiansen

43683

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
1/6/60	ACP	500
	Swanson	500
1/7	Talbert	800
1/8	GCS	130
1/8	Johnson	110
1/8	C	220
		500

JAN 8 1960

Memorandum

To: Executive Officer, OME Field Team, Region III

From: Chairman, Operating Committee, OME

Subject: Docket No. OME-6015 (Lead-Copper)
Glen Larsen
Iron Blossom Mine
Juab County, Utah
Con tract No. 2003

This is with reference to your memorandum of December 31, 1959, in which you recommended a Termination Agreement be prepared for the cited contract. The Field Team has recommended that on the basis of the unfavorable finding of Stage I work which was considered completed, Stage II cannot be approved. Therefore, in accordance with the second paragraph of Exhibit "A" of the contract, the work under the contract is considered as being terminated and it will not be necessary to prepare a Termination Agreement. Please advise the Operator of this action.

/s/ George C. Selfridge

(GCS)

APPROVED:

Frank D. Lamb (FDL)
Member, Bureau of Mines

Harold Kirkemo (HK)
Member, Geological Survey

JWAlt/gla 1-7-60
cc to: Director's Reading File
Operating Committee
H. M. Callaway, USBM
Harold Kirkemo, USGS
Docket
Chron

see Reg. III letr, 1/12/60 to dpr, on left-hand side

43683

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
Building 20 - Federal Center
Denver 25, Colorado
December 31, 1959

OFFICIAL FILE COPY O. M. E. RECEIVED JAN 4 1960		
DATE	INITIALS	CODE
1-4	gad	VVO
		130
1/5/60	Talbert	800
"	~~Cet~~	~~500~~
III		

Memorandum

TO: Chairman, Operating Committee, OME

From: Executive Officer, OME Field Team, Region III

Subject: Docket No. OME 6015 (Lead-Copper) Contract No. 2003
Glen Larsen (Iron Blossom mine) Juab County, Utah

In reference to matter discussed in your memorandum of December 18, 1959, enclosed are the original and one copy of a final report submitted by the Operator pertaining to work completed under the contract. The report is somewhat meager; however, it is recommended that it be accepted as complying with contract requirements because the final engineering and geologic report by OME examiners will contain any additional information needed.

The Operator confirmed prior advice by telephone that he wished to terminate the contract in its present status. As the work completed under Stage I leaves 35 ft. of drifting provided for under the contract to be completed, it is recommended that a Termination Agreement be prepared to terminate the contract effective October 1, 1959.

J. W. Townsend

J. W. Townsend

35 ft.

W.O.

28 December 1959
Eureka, Utah

MINERAL DEPOSITS
O M E
RECEIVED

DEC 28 1959

U. S.
GEOLOGICAL SURVEY
DENVER, COLORADO

J. William Hasler
U. S. Geological Survey
Denver Federal Center
Building 25
Denver 25, Colorado

Dear Sir:

I have been unable to have the maps printed because Mr. Pitts has been out of town. If you would print them again it would help to get this report completed and if there is any charge for the work I shall be happy to pay for it.

They held out $300.00 on my last footage check and I would like to know if this was to cover some expense connected with the loan or just what.

Thank you for your kindness and consideration in this matter.

Sincerely,

Glen Larsen
Eureka, Utah

Glen Larsen

GL:hrk

OME
DEPARTMENT OF THE INTERIOR
DEC 31 1959
REGION III
DENVER, COLORADO

OFFICIAL FILE COPY
O. M. E.
RECEIVED JAN 4 1960

DATE		CODE

OPERATOR'S
FINAL RE-
PORT

WO.

OFFICIAL FILE COPY
O. M. E.
RECEIVED JAN 4 1960
DATE CODE
MINERAL DEPOSITS
O M E
RECEIVED
DEC 28 1959
U. S.
GEOLOGICAL SURVEY
DENVER, COLORADO

26 December 1959
Eureka, Utah

United States Department of the Interior
Bureau of Mines
Office of Mineral Exploration
Denver Federal Center
Denver, Colorado

OME
DEPARTMENT OF THE INTERIOR
DEC 31 1959
REGION III
DENVER, COLORADO

Dear Sirs:

I submitted an application for some assistance in exploration of the No. 1 Iron Blossom Mine early this spring. The United States Geological Survey sent out a very qualified engineer and geoligist by the name of Frank Moore to make an inspection of the property. After his examination the Gov ernment approved an OME loan to start development. Mr. Moore had more foresight than the rest of us and he set the ooan up in two stages; the second stage depending on the results of th e first.

If you will re fer to figure # 3 Composite Plan of 200-300 and 400 levels of the Iron Blossom Mine you will notice th e recommended exploration on the 300 level of stage I. You will see a well defined fissure with good mineralization on it at both ends of the proposed exploartion.

We started our drift on the south end of the vein and drifted in a North-easterly direction. The first month we drifted on this vein for a distance of 160 feet. We had several small veins of ore of commercial vaule but not large enough to be of any real economic value because they were too small.

The next month we drifted 90 feet in this drift and 80 feet to the south. The drift to the south followed a large vein of manganeese and we drifted as far as the contract would allow us in this direction. The 90 foot drift to th e north came to a large fault zone that we drifted into 75 feet the next month. Then we waited for the government engineers to make an inspection because we did not feel the drift was a good investment for ourselves or for the Government.

We run a cross-cut at our own expense before the Bureau of Mines made the inspection and we have sunk a winze 25feet since they were here but we have not found any good indications of ore in the fissure below us. Because of this we would like to terminate the contract if it meets with the approval of the Burea of Mines.

We believe the engineers on this project have been very competent and on our part we have tried to do every piece of the work outlined to the best of our ability and to follow the suggestions of the engineers. If there if any work the Bureau of Mines feels that we could do at our own expense before the contract is terminated to help the government and ourselves discover any ore we would be pleased to do it.

This is a fine program supervised by good men and we are indeed thankful for the original grant.

Sincerely,

Glen Larsen

Glen Larsen
Eureka, Utah

GL:hrk

OFFICIAL FILE COPY
O. M. E.
RECEIVED JAN 4 1960

DATE		
1-4	gad	VVO
"	EEF	800
1-5	GLT	500

Building 20 - Federal Center
Denver 25, Colorado
December 31, 1959

Mr. Glen Larsen
Eureka
Utah

Re: Docket No. ~~OME 6015 (Lead-Copper)~~
Contract No. 2003
Glen Larsen
(Iron Mission mine)
Juab County, Utah

Dear Mr. Larsen:

Receipt is acknowledged of the five copies of the report submitted by you as a final engineering and geologic report pertaining to work completed under Contract No. 2003.

In processing your accounting report for the month of September, 1959, $500 was withheld from reimbursement to you pending release to this office of a Report of Review of reported project costs by the Contract Administration and Audit Division, OME. The review of costs cannot be scheduled until the matter of terminating the contract has been resolved. We have recommended to the Washington Office, OME, that a Termination Agreement be prepared and forwarded for execution.

Very truly yours,

Original signed by

J. W. Townsend
Executive Officer, OME
Field Team, Region III

JWT:ltm

cc: Chmn. Op. Comm. (2)
Hasler
OME/SLC
Corres. file
Susp.
Chron.

Form 7
(58)

OFFICIAL FILE COPY

Date	Surname	Code
12/17	[illegible]	500
	[illegible]	500
12/18	[illegible]	130
12/18	Johnson	110
12/18	gad	220
		500

DEC 18 1959

Memorandum

To: Executive Officer, OME Field Team, Region III

From: Chairman, Operating Committee, OME

Subject: Docket No. OME-6015 (Lead-Copper)
Glen Larsen
Iron Blossom Mine
Juab County, Utah
Contract No. 2003

With reference to the memorandum to you from J. W. Hasler and T. M. Romslo, dated November 10, 1959, regarding the cited contract, please contact the Operator and advise him to submit his written request for approval of Stage II at his earliest convenience. The Operator certainly has had sufficient time to submit this request and, if he does not submit it soon, we would appreciate your recommendations pertaining to this contract.

/s/ George C. Selfridge (26B)

APPROVED:

Frank D. Lamb (26B)
Member, Bureau of Mines

Harold Kirkemo (26B)
Member, Geological Survey

JWAlt/gla 12-17-59
cc to: Director's Reading File
Operating Committee
Mr. Bishop, USBM
Mr. Kirkemo, USGS
Docket
Chron

43683

Building 20 - Federal Center
Denver 25, Colorado
November 10, 1959

Memorandum

TO: J. W. Townsend, Executive Officer, OME Field Team, Region III

From: J. W. Hasler and T. M. Romslo

Subject: Docket No. OME 6015 (Lead-Copper) Contract No. 2003, Glen Larsen (Iron Blossom mine) Juab County, Utah

The writers examined the pertinant underground workings of the Iron Blossom mine in the company of Glen Larsen, Operator, November 3, 1959. The object of the examination was to determine if additional explorations are warranted. Completed explorations comprised all of Stage I work except for possibly 30 feet of additional drifting to the north from the Malstein stope on the 300 level.

Following are our conclusions relative to continuation of the project.

1. We agree with the Operator's opinion that Stage I work should be considered complete since conditions for finding ore in the remaining untested area are unfavorable.

2. On the basis of the unfavorable findings of Stage I work, Stage II cannot be approved. However, our final decision will be withheld pending consideration of reasons for justification of the work which Mr. Larsen is expected to include with a written request for approval of Stage II.

J. W. Hasler
J. W. Hasler

T. M. Romslo
T. M. Romslo

OFFICIAL FILE COPY
O. M. E.
RECEIVED NOV 16 1959

DATE	INITIALS	CODE
11-16	gad	VVO
11/16	[illegible]	800
11/17	alf	500

TMR:ltm

cc: 6
Chron.

Building 20 - Federal Center
Denver 25, Colorado
August 4, 1959

Mr. Glen Larsen
Eureka
Utah

Re: Docket No. OME 6015 (Lead-Copper)
Exploration Contract No. 2003
Glen Larsen
(Iron Blossom mine)
Juab County, Utah

Dear Mr. Larsen:

Enclosed is the Operator's copy of Amendment No. 1 which has been executed to establish the maximum interval of samples to be taken in drifts and crosscuts.

Very truly yours,

Original signed by
J. W. TOWNSEND

J. W. Townsend
Executive Officer, OME
Field Team, Region III

JWT:ltm
Enclosure
cc: Chmn. Op. Comm. (2) w/Gvt & Adt. copy of Amend.
Finance Office, Reg. III) w/cpy of
Hasler) Amend.
OME/DFC)
Corres. file, Reg. III)
Susp. file
Chron.

OFFICIAL FILE COPY
O. M. E.
RECEIVED AUG 7 1959

DATE	INITIALS	
8-7	gad	vvo

OFFICIAL FILE COPY
O. M. E.
RECEIVED JUL 20 1959

DATE	INITIALS	CODE
7-20	gad	rvo
7/20	[illegible]	800
7-20	RJ	500

224 New Customhouse
Denver 2, Colorado

July 17, 1959

Mr. Glen Larsen
Eureka
Utah

Re: Docket No. OME 6015 (Lead-Copper)
Exploration Contract No. 2003
Glen Larsen
(Iron Blossom mine)
Juab County, Utah

Dear Mr. Larsen:

Enclosed are the Government's, Audit, Finance Office, and Field Team copies of proposed Amendment No. 1 to Contract No. 2003, which has been prepared to establish basis for taking samples in drifts and crosscuts.

If the Amendment is satisfactory, all copies are to be signed by you as indicated and all copies promptly returned to this office, upon receipt of which the Operator's copy will be forwarded to you.

Very truly yours,

Original signed by
J. W. TOWNSEND

J. W. Townsend
Executive Officer, OME
Field Team, Region III

Enclosure
JWT:ltm

cc: Chmn. Op. Comm. (2)
Harshman
OME/DFC
Corres. file, Reg. III
Susp. file
Chron.

OFFICIAL FILE COPY
O. M. E.
RECEIVED JUL 10 1959

DATE	INITIALS	CODE
7-10	gad	1110
7/10	[illegible]	800
~~[illegible]~~	~~[illegible]~~	~~[illegible]~~

224 New Customhouse
Denver 2, Colorado

July 6, 1959

Mr. Glen Larsen
Eureka
Utah

Re: Docket No. GME 6015 (Lead-Copper)
Exploration Contract No. 2003
Glen Larsen
(Iron Blossom Mine)
Juab County, Utah

Dear Mr. Larsen:

Enclosed are six copies of Form MF-104, Operator's Monthly Report and Voucher, and six copies of Form MF-104A, Operator's Unit Costs and Progress Report. At the end of the first calendar month after work is commenced, and monthly thereafter, you are required to submit the original and four copies of each report form to the Executive Officer, Office of Minerals Exploration, 224 New Customhouse, Denver 2, Colorado.

Forms MF-104 and MF-104A are to be combined into five sets comprised of one of each form. Each set of the combined form is to be accompanied by a map or sketch showing the location and extent of the work performed, and a signed Narrative Report which describes the work performed, conditions encountered, and results of the work. The monthly accounting report will not be processed for reimbursement of the Government's portion of the allowable costs of the work unless it is accompanied by a signed Narrative Report and other required or pertinent data. Additional copies of Forms MF-104 and MF-104A will be forwarded to you each month on receipt of your report for the prior month.

For your information, and in reply to many questions that have been asked, after completed Forms MF-104 and MF-104A are received in this office, an engineer or geologist will check progress on the project, after which, the report forms will be processed by this office for reimbursement to you under the provisions of the contract. If the report is in order, a check will be issued by the Treasury Department for the Government's portion of the approved costs. If you have any difficulty in completing the report forms, please feel free to call on this office for assistance.

The contract is prepared on MME Form 51, and under its provisions, and as outlined in Exhibit "A" attached to the contract, the work is to be performed at "Fixed Unit Costs" which will be the basis for reimbursement to you as units of work are completed and reported at the end of each month on Forms MF-104 and MF-104A. For further information in preparing the report forms, please refer to the instructions printed on the back of each form.

Your requests to this office for work approval changes in the contract, or any other communication pertaining to operations under the contract, must be in writing, of which, please supply the original and five copies, each copy complete with maps or other pertinent data. Each request for action by this office must pertain to one matter only. Such requests are not to be incorporated in your Narrative Report accompanying the Monthly Progress Report Forms MP-104 and MP-104A.

Your attention is directed to the provision that Stage II work is contingent on results obtained from the work under Stage I, and performance of the work under Stage II is subject to the prior written approval of the Government.

When work under Stage I has been completed or sufficiently so to permit evaluation of the results of the work, you must request approval from this office for the work you propose to perform under Stage II. Your request for the work approval must be in sextuplicate, each copy complete with a map showing the location and extent of the work completed under Stage I, and the location and extent of the additional work proposed. Also your request must include an evaluation of the work completed, and include assay returns and any other pertinent data which will be of value to the Government in appraising the results of the work.

You should anticipate a suspension of operations between Stages of work to enable the Government geologist and engineer to evaluate the results of the work performed and make their recommendations to this office relative to the additional work you propose.

To eliminate as much delay to operations as possible, if that is of serious consideration, you should expedite forwarding of the results of the work completed and your request for the Government's approval of the additional work you propose.

No oral statement of any person shall be construed to modify or change the terms of the contract. Field representatives of the Government are not authorized to approve any changes in the work program or contract provisions. Such approval can only be given by the Washington Office, OME, or by the OME Field Team, Region III.

It is a regulation that reimbursement for the costs of work accomplished prior to the date of the contract will not be allowed.

It is a requirement and imperative that you notify this office in writing the date work was commenced under the contract.

JWT:ltm

cc: Chmn. Op. Comm. (2)
Finance Off. Reg. III
Amendment file, Reg. III
Harshman
OME/DFC
Corres. file, Reg. III
Susp. file
Chron.

Very truly yours,

Original signed by
J. W. TOWNSEND

J. W. Townsend
Executive Officer, OME
Field Team, Region III

Memorandum for the Files

From: W. P. Klugescheid, Mining Engineer, Division of Minerals

Subject: Justification for Amendment No. 1 for Docket No. OME-6015, Glen Larsen, Iron Blossom Mine, Juab County, Utah, Contract No. 14-23-090-2003, Lead-Copper.

This amendment was requested by the Field Team through Mr. Selfridge.

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
7-13	Klugescheid	500
	[illegible]	500
7/13	Talbut	800
7/14	Selfridge	130
"	Johnson	110
		~~100~~
		~~HB~~
7-15	gad	220
		500

500

JUL 14 1959

Memorandum

To: Executive Officer, OME Field Team, Region III

From: Chairman, Operating Committee, OME

Subject: Docket No. OME-6015 (Lead-Copper)
Glen Larsen
Iron Blossom Mine
Juab County, Utah
Contract No. 14-23-090-2003

We are enclosing the original and four copies of a proposed Amendment No. 1 (one page) to the above contract, signed by the Acting Director, for the Government. We are also enclosing two extra copies for the use of the Field Team.

This amendment is made to correct the lack of sampling instructions in the contract.

If the proposed amendment meets with your approval, kindly present it to the Applicant for approval and signature and, when completed, distribute the copies in the usual manner. In the event that the contract is not satisfactory, and cannot be amended within your delegated authority, return all copies with your recommendations concerning any modification.

/s/ George C. Selfridge (HB)

Enclosures

APPROVED:

Frank D. Lamb (HB)
Member, Bureau of Mines

Harold Kirkemo (HB)
Member, Geological Survey

WPKlugescheid/er 7-13-59
Copy to: Docket
Dir Read File
Op. Committee
Mr. Bishop, USBM
Mr. Kirkemo, USGS
Chron.

4369

Government's copy

EXPLORATION PROJECT CONTRACT
GLEN LARSEN
DOCKET NO. OME-6015

AMENDMENT NO. 1

File J. Lynch Hoffland App'd. Sol. Off. Klugeschied Howard Talbut

It is agreed this _____ day of _____, 1959, between the United States of America, acting through the Department of the Interior, Office of Minerals Exploration, hereinafter called the "Government," and Glen Larsen, hereinafter called the "Operator," that Exploration Project Contract No. ~~14-03-690~~-2003 (Docket No. OME-6015), dated June 16, 1959, is amended as follows:

In Exhibit "A", Description of the Work, add a paragraph 5 to read as follows:

All significantly mineralized ~~veins~~ mineralized encountered in the drifting and crosscutting shall be sampled at linear intervals of not greater than ten feet. Samples shall be cut normal to the veins. ~~Sample~~ results and locations ~~will~~ shall be accurately shown on monthly ~~progress maps~~ submitted to the Government. All samples shall be split and one-half thereof assayed for lead, copper, zinc, silver, and gold. The remaining half of all samples shall be furnished to the Government upon request.

This amendment shall not be construed to increase the estimated total cost of the project, the aggregate total amount which the Government may be required to contribute, or the fixed unit cost of any item of work.

Executed in quintuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By _____
Acting Director, Office of Minerals Exploration

GLEN LARSEN

_____

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
	Kluegescheid	500
	Hirsand	500
		140

500

July 6, 1959

Memorandum

To: Acting Associate Solicitor, Division of Minerals Resources

From: Chief, Division of Minerals

Subject: Preparation of Amendment No. 1
Docket No. OME-6015 (Lead-Copper)
Glen Larsen
Iron Blossom Mine, Juab County, Utah
Contract No. 14-23-090-2003

Will you kindly prepare Amendment No. 1 for the cited contract in accordance with the attached draft.

Attachment

WPKluegescheid/hb (7/6/59)

Copy to: Docket
Director's Reading File
Chron.

8623

DRAFT
WPKlugescheid (7/6/59)

EXPLORATION PROJECT CONTRACT
GLEN LARSEN
DOCKET NO. OME-6015

AMENDMENT NO. 1

It is agreed this _____, day of _____, 1959, between the United States of America, acting through the Department of the Interior, Office of Minerals Exploration, hereinafter called the "Government," and Glen Larsen, hereinafter called the "Operator," that Exploration Project Contract No. 14-23-090-2003 (Docket No. OME-6015), dated June 16, 1959, is amended as follows:

In Exhibit "A," "Description of the Work," add a paragraph 5 to read as follows:

All significantly mineralized veins encountered in the drifting and crosscutting shall be sampled at linear intervals of not greater than ten feet. Samples shall be cut normal to the veins. Sample results and locations will be accurately shown on monthly progress maps submitted to the Government. All samples shall be split and one-half thereof assayed for lead, copper, zinc, silver, and gold. The remaining half of all samples shall be furnished to the Government upon request.

This amendment shall not be construed to increase the estimated total cost of the project, the aggregate total amount which the

Government may be required to contribute, or the fixed unit cost of any item of work.

Executed in quintuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By _____
Acting Director, Office of
Minerals Exploration

_____
Glen Larsen

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
224 New Customhouse
Denver 2, Colorado

June 26, 1959

AIR MAIL

Memorandum

TO: Chairman, Operating Committee, OME

From: Executive Officer, OME Field Team, Region III

Subject: Docket No. OME 6015 (Lead-Copper) Exploration Contract No. 2003
Glen Larsen, (Iron Blossom mine) Juab County, Utah

Enclosed are the Government's and Audit copies of the subject contract which was forwarded by your letter of June 16, 1959, for signature by the Applicant.

The copies of the executed contract have been distributed to the Operator, the Finance Office, and others concerned in Region III.

J. W. Townsend

J. W. Townsend

Enclosure

OFFICIAL FILE COPY
O. M. E.
RECEIVED JUN 29 1959

DATE	INITIALS	CODE
6/29	a	220
7/1	Kby	500
6/29	C	210

O. M. E.
RECEIVED JUN 29 1959
DATE INITIALS CODE

[illegible] Ave Continental
Denver 2, Colorado

June 26, 1959

[illegible]

Mr. Glen Larsen
Sunshine
Utah

Re: Docket No. [illegible] (Sunshine)
Exploration Contract No. [illegible]
Glen Larsen
(Iron Blossom mine)
Juab County, Utah

Dear Mr. Larsen:

Enclosed is the Operator's copy of Contract No. [illegible].

The blank report forms and instructions relative thereto mentioned in the last paragraph of my letter to you of June 18, 1959, will be forwarded at a later date.

Please advise this office the date work under the contract is actually commenced.

Very truly yours,

Original signed by
J. W. TOWNSEND

J. W. Townsend
Executive Officer, OME
Field Team, Region III

Enclosure

JWTilm

cc: Chief. Op. Comm. (2)
Durham
OME/DPS
Operat. File, Reg. III
Comp. File
Chrono.

OFFICIAL FILE COPY
O. M. E.
RECEIVED JUN 22 1959

DATE	INITIALS	CODE
6/22	a	220
~~[illegible]~~	~~[illegible]~~	~~[illegible]~~

22½ New Customhouse
Denver 2, Colorado
June 19, 1959

CERTIFIED MAIL

Mr. Glen Larsen
Eureka,
Utah

Re: Docket No. OME 6015 (Lead-Copper)
Glen Larsen (Iron Blossom mine)
Juab County, Utah
Proposed Exploration Contract
(Short Form) No. 14-23-090-2003

Dear Mr. Larsen:

Enclosed are the Government's, Audit, Finance Office, and Field Team copies of the referenced contract, which has been prepared pursuant to your application for Federal assistance in exploration work under the program of the Office of Minerals Exploration.

If the contract is satisfactory, all copies are to be signed by you as indicated, and all copies promptly returned to this office. If the contract is to become effective and funds allocated this fiscal year, all copies of the contract must be returned properly signed to this office as soon as possible but not later than June 26, 1959.

In the event the contract is not satisfactory, all copies are to be returned promptly to this office, together with your comments or objections to the contract.

If the contract is satisfactory, and upon return to this office of all copies properly signed, the "Operator's Copy" of the contract will be forwarded to you, together with blank report forms and instructions relative to reporting on work performed under the contract. Also, instructions will be given as to the procedure to be followed in corresponding with this office in matters concerning operations under the contract.

Very truly yours,

Original signed by
J. W. TOWNSEND

J. W. Townsend
Executive Officer
OME Field Team, Region III

Enclosures
JWT:jy
cc: Chm. Op. Comm. (2)
Harshman
Docket
Suspense
Chron.

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
6-12	Klugescheid	500
	[illegible]	500
6/12	Jackson	800
6/16	[illegible]	130
"	Johnson	110
		~~100~~
		~~HD~~
6/16	a	220
		500

500

JUN 16 1959

Memorandum

To: Executive Officer, OME Field Team, Region III

From: Chairman, Operating Committee

Subject: Docket No. OME-6015 (Lead-Copper)
Glen Larsen
Iron Blossom Mine
Juab County, Utah

We are enclosing the original and four copies of a proposed short form contract for the cited project, signed by the Acting Director, for the Government. The complete contract includes the contract form (MME Form 51), Annex I (1 page), Exhibit "A" (three pages), Lien and Subordination Agreements (MME Form 52), and two maps. Also are enclosed two extra copies of Annex I and Exhibit "A", for the use of the Field Team.

If the proposed contract meets with your approval, kindly present it to the Applicant for approval and signature and, when completed, distribute the copies in the usual manner. In the event that the contract is not satisfactory, and cannot be amended within your delegated authority, return all copies with your recommendations concerning any modifications.

If at all possible we would like to have this contract executed before July 1, 1959. If this contract is not signed and postmarked before midnight of June 30, 1959, to come in under the 1959 appropriation, it would have to be allocated to the 1960 appropriation, when and if passed.

/s/ George C. Selfridge (dlb)

Enclosures

WPKlugescheid/er 6-12/59
Copy to: Docket
Dir Read File
Op. Committee
Mr. Bishop, USBM
Mr. Kirkemo, USGS
Chron.

APPROVED:

Frank D. Lamb (dlb)
Member, Bureau of Mines

Harold Kirkemo (dlb)
Member, Geological Survey

P. S. It is suggested that approval for Stage II should not be given unless the results of Stage I indicates that the Government Participation in the Stage II work will be repaid by royalties.

43683

Re: OME - 60[illegible]5

How does applicant propose to finance his share of project costs? He has only $400 in cash and was unable to get a loan on equipment. The $400 will not meet the first week's anticipated payroll.

Fallin

6/12/59

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF THE SOLICITOR
WASHINGTON 25, D. C.

JUN 11 1959

Memorandum

To: Acting Director, Office of Minerals Exploration

From: Acting Associate Solicitor, Division of Mineral Resources

Subject: Docket No. OME-6015, Glen Larsen, Juab County, Utah

We have drafted in final form the subject contract pursuant to the memorandum to the Associate Solicitor, Division of Mineral Resources dated June 9, 1959.

The draft submitted by Mr. Griswold has been followed, except that in Article 6(c), page 3, the word "operator's" has been stricken as requested in our memorandum to the Acting Director dated May 4, 1959.

J. L. Hofflund

Attachments

Memorandum for the Files

From: W. P. Klugescheid, Mining Engineer, Division of Base Metals

Subject: Justification for Contract for Docket No. 6015, Glen Larsen, Iron Blossom Mine, Juab County, Utah.

The property was examined by F. B. Moore, Geological Survey, and M. H. Howes, Bureau of Mines, on April 8, 1959.

Since the denial of the previous application in 1958, the Operator has driven approximately 500 feet of various types of workings and in so doing has reopened extensive workings on the 300 level.

Present operations are being conducted through the Larsen winze which was driven from the 200 level to the 300 level.

The Field Examiners state: "There remains ample virgin ground in the proposed exploratory area to contain ore reserves of considerable size and value.

The Stage I work is on what is known as the Muhlstein fissure which has been mined by two stopes but which has not been explored over a length of some 440 feet. The starting point of both the northerly and southerly drifts is in a highly mineralized vein.

The project recommended by the Field Examiners is a modified one and does not exactly follow the original application but the work of Stage I is as was originally requested and the work of stage II as recommended has been approved by the Applicant.

Stage II is contingent upon the results obtained by the work of Stage I. The sinking and crosscutting will reveal whether the ore continues downward but it might have been better to have taken a bigger bite as to depth. The 400 level is completely inaccessible at this time so no other definite plan can be made for this level other than the one proposed.

The Applicant submitted a statement of Assets and Liabilities and requests for loans to several banks which were denied. The Applicant offered machinery as security for the loan as well as his home. The Contract Administration and Audit Division considers that the Applicant is eligible for an exploration contract.

The Field Team concurs with the findings of the Field Examiners. WheP. Williams, Geological Survey concurs with the findings. O. M. Bishop, Bureau of Mines recommends that the application be denied due to the limited size of the exploration block.

We concur in the staged program as Stage I will either prove or disprove the feasibility of the project without too great an expenditure of money.

Criteria used in passing upon the Application.

(a) The Muhlstein fissure has been stoped in one section and there is an unexplored block of ground 360 feet long which has not been explored and which shows some mineralization at the end at which the work is planned. If the fissure shows ore grade mineralization in Stage I it will be very logical to explore it on the lower level in Stage II. The geological probabilities are good.

(b) Grade of ore mined from the Muhlstein stope ran: from 18 to 70 ozs. of Ag per ton, 1% to 11% copper, and up to 20% lead.

Assuming a block 260 feet by 200 feet by 4 feet thick or 208,000 cubic feet @ 10 cu.ft. per ton would give a possible ore reserve of 20,800 tons. If this were to go to greater depth this could be increased and assuming 50% of this as actually being present in the ground we would have say 10,000 tons of ore with an assumed grade of 20 ounces of silver, 5 % copper, and 10% lead, or 20 ounces silver, 100 pounds of copper, and 200 pounds of lead per ton.

20 x $0.90	::	$18.00 per ton.
100 x 0.9 x $0.25	::	22.50 " "
200 x 0.8 x $0.12	::	19.20 " "
		$59.70 per ton

$60 x 10,000 :: $600,000 total value. This is of course purely conjecture and cannot be relied upon but a much greater value of ore than the total cost of the project is easily imaginable.

(c)The plan and method of carrying on the exploration is satisfactory particularly the division of the project into two stages.

(d) The project is easily accessible.

(e) The Operator is one well experienced in mining in this district.

(f) The Operator is in possession by virtue of a lease and agreement with the Tintic Standard Mining Company.

(g) Funds were not available from commercial sources as the requests for a loan were rejected by the banks.

(h) The Operator certified in the application that he would not undertake the exploration at his sole expense under current conditions and circumstances.

March 23, 1959
J. W. Alt, Engineer

REPORT ON EXPLORATION ASSISTANCE APPLICATION

Applicant: Glen Larsen
Eureka, Utah

Docket No. OME-6015 (Lead-Cooper)
Date of Application - February 20, 1959
Date Received - March 2, 1959
Name of Property - Iron Blossom Mine
Juab County, Utah

Proposed Project and Cost

The Applicant's proposed exploration work consists of: sink a winze 105 feet from the 300 Level to the 400 Level, drift 475 feet on the 300 Level, rehabilitate 210 feet of the 400 Level, drift and cross-cut 165 on the 400 level. The total estimated cost is $25,936.64. The Applicant's estimated cost per foot for doing the above mentioned work is very reasonable.

The Applicant had previously submitted an application for the same property, DMEA-5004, which was received on May 5, 1958. It was for more extensive work than that of the present application. The estimated cost for the project was $54,564.11. A field examination of the property was made on May 9, 1958. The Field Examiners recommended a modified exploration program at a total estimated cost of $30,626.41. This recommendation was denied by the Field Team, the commodity members and by the Director, Division of Base Metals.

The Field Team state:

"At the time of the examination the only accessible workings in the project area were the No. 1 tunnel (200 level) to a point slightly beyond the Larsen winze, and the 300 level from the Larsen winze to caved area near the start of Project 5 (fig. 3). The proposed work is therefore based on data furnished by the applicant and that shown on old plan and section maps."

The Applicant now states that he has rehabilitated Tunnel No. 1 through a distance of about 300 feet beginning at the portal, has sunk the Larsen winze to a depth of about 100 feet below the tunnel, has re-opended extensive workings on the 300 level, has driven a new drift ("F" to "G" on Map 8-4) about 150 feet, connecting with the Muhlstein Stope, and has driven a new drift ("H" to "J" on Map 8-4) about 220 feet.

The above mentioned work should make the 300 Level accessible for an examination of the proposed work on that level and should enable the examiners to determine if the winze should be sunk, and the proposed work should be done on the 400 level.

It is difficult to appraise the Applicant's proposed project until we have the Field Team recommendations.

Financial Eligibility

The Applicant wrote to one loan company and to one bank in which he has listed $15,000.00 worth of equipment as collateral. Both application for loans were refused.

Home Acceptance Corporation
H. A. Company
282 University Street
Provo, Utah

Kamas State Bank
Kamas, Utah

Apparently there are no other persons interested in this exploration project.

Reviews:

Mr. Nelson, commodity member, U.S. Geological Survey, recommends denial of the application, whereas Mr. Bishop, Bureau of Mines, recommends a field referral as the property is now accessible for an examination. The Applicant's estimated cost are very reasonable, in fact it is doubtful if he can do the work the 400 Level where more labor will required because of transferring the waste rock and ore to the 200 Level.

The Applicant states that he has had many years of mining experience in the Iron Blossom Mine and the Dragon mine which adjoins the south end of the Iron Blossom mine.

The property is accesible for the entire year by road from Eureka, Utah, which is the shipping and supply point and is approximately three miles north of the Iron Blossom Mine.

The Applicant is the lessee of six patented lode mining claims and has submitted the Lease and Agreement, and the Lien and Subordination Agreements.

Field referral was made on March 2 , 1959.

J. W. Alt
J. W. Alt.

RECALCULATION OF COSTS AND TIME NEEDED FOR WORK.

RECALCULATION OF COSTS AND TIME NEEDED.

Track

8,016#/1000' :: 8#/ft x 0.13 :: $ 1.04 per foot/

Splice Bars

$1.20 for each 2 pairs.
2 pairs every 15 feet.
$1.20/15 :: 0.08 " "

Bolts

103#/1,000' :: 0.103#/ft. 27.13/100 :: $0.27/#
0.27 x 0.1 :: 0.03 " "

Spikes

323/1,000 :: 0.323#/ft. $17.15/100# :: $0.172/#
0.323 x 0.172 0.05 " "

Ties

0.5 tie per foot and assume tie 4"x6"x3'0":: 6 Bd.Ft.
85/1,000 :: 0.085/Bd.Ft/ 0.085 x 6 0.51 " "

Total Track Cost. $ 1.71 per foot

Track and accessories $1.20/2 ::$0.60 salvage value. $0.60 + 0.50(ties):: $1.10 per foot for track.

Timber for Winze.

32--8" x 8" x 10'0"	Wall Plates.
16--8" x 8" x 12'0"	End Plates.
6--6" x 8" x 12'0"	Dividers.
500--2" x 12" x 6'0"	Lagging.
96--6" x 8" x 6'0"	Posts.
16--4" x 4" x 14'0"	Guides.

32 x 53.33	:: 1,706 Bd. Ft.	x $85.00/1,000	::	$ 145.00
16 x 64	:: 1,024 " "	x $85.00/1,000	::	87.00
6 x 48	:: 288 " "	x $85.00/1,000	::	25.00
250 x 24	:: 6,000 " "	x $75.00/1,000	::	450.00
16 x 18.67	:: 300 " "	x $120.00/1,000	::	36.00
48 x 48	:: 2,300 " "	x $85.00/1,000	::	196.00
Wedges etc.	768 " "	x $85.00/1,000	::	65.00

Total Cost of Timber $1,004.00

1,004/105' :: $ 9.56/ft.

Say Timber Cost as $ 9.50/ft.

Pipe.

2" Air line and fittings @ $0.65 per foot
3/4" Water line @ 0.35 " "

$1.00 per foot/2 :: $0.50 per foot salvage value.

Hose

Assume 3--1" air hose for 2 machines 50' @ $0.88/ft.
150 x $0.88 :: $ $ 132.00
Assume 3- water hose for 2 machines 50' @ $0.50/ft.
150 x $0.50 :: 75.00

Total cost of hose $ 207.00

Depreciate over a period of 6 months or 26 weeks.
Hose charge for different items :: 1/26 x $207.00/week.

Depreciation per week.

Winze		Drifts and Crosscuts.	
1 Mancha Locomotive	$ 13.80	1 Mancha Locomotive	$ 13.80
1 Locomotive Battery	3.40	1 Locomotive Battery	3.40
2 Transformers	3.80	2 Transformers	3.80
?—4 Rock Drills	7.20	4 Rock Drills	7.20
1 Air-Powered Hoist	4.60	1 Air-Powered Hoist	4.60
10 Mine Cars	3.80	10 Mine Cars	3.80
1 Compressor	11.50	1 Compressor	11.50
1 Diesel Engine	15.40	1 Diesel Engine	15.40
2 Trucks	8.30	2 Trucks	8.30
		1 Eimco Loader	7.70
Total	$ 71.80	Total	$ 79.50

Labor

Winze		Drifts and Crosscuts.	
1 Hoistman @ $20.26/day	$ 20.26	1 Hoistman @ $20.26/day	$ 20.26
1 Topman-Trammer @ $20.26/day	20.26	1 Topman-Trammer @ $20.26/day	20.26
3 Miners @ $20.26/day	60.78	2 Miners @ $20.26/day	40.52
Engineer-Geologist @ $5.00/day	5.00	Engineer-Geologist @ $5.00/day	5.00
Total Cost for Labor per day	$106.30	Total Cost for Labor per day	$ 86.04
@ 5 day week x	5	@ 5 day week x	5
Labor Cost per Week	$531.50	Labor Cost per Week	$430.20

STAGE I -- DRIFTING ON THE 300 LEVEL.

440' @ 5 feet per day :: 88 days or 18-5 day weeks.

Labor & Supervision @ $430.20/week and 18 weeks	$ 7,743.60
Additional Payroll @ 15% of Labor	1,161.54
Fuel @ $65.00 per week and 18 weeks	1,170.00
Drill Steel and Bits @ $0.80/ft. and 440'	352.00
Explosives @ $3.50/ft.	1,540.00
Pipe and fittings @ $0.50 per foot	220.00
Equipment Depreciation @ $79.50/week and 18 weeks	1,431.00
Air Hose @ 18/26 x $207.00	145.00
Track @ $1.10 per foot	484.00
1 switch @ 15/2 :: $7.50	7.50
Repairs and Maintenance @ $1.00 per foot	440.00
Miscellaneous Tools @ $0.50 per foot	220.00
Total Cost	$ 14,914.64
Timber for Drifts 50' @ $7.90/foot	375.00
30 samples @ $5.00 each sample	150.00

STAGE II**SINKING WINZE FROM THE 300 TO THE 400 LEVEL.

105' @ 2 feet per day :: 53 days or 11-5 day weeks.

Labor & Supervision @ $531.50 per week and 11 weeks	$ 5,846.50
Additional Payroll Taxes etc @ 15% of above	709.83
Fuel @ $65.00 per week	715.00
Drill Steel and Bits @ $0.80 per foot	84.00
Explosives @ $4.00 per foot	420.00
Hanging Rods @ $1.00 per foot	105.00
Timber @ $9.50 per foot	997.50
Pipe and Fittings @ $0.50 per foot	53.00
Equipment Depreciation @ $71.80 per week	789.80
Repairs and Maintenance @ $1.00 per foot	105.00
Hose @ 11/26 x $207.00	87.60
*	
Total Cost	$ 9,913.23

9,913.23/105 :: $ 94.41 per foot.

Say $94.00 per foot.

STAGE II -- CROSSCUTTING ON THE 400 LEVEL.

200' @ 5 feet per day :: 40 days or say 8.5-5 day weeks.

Labor and Supervision @ $430.20 per week and 8.5 weeks	$ 3,656.70
Additional Payroll Cost @ 15% of above	548.50
Fuel @ $65.00 per week	552.50
Drill Steel and Bits @ $0.80 per foot	160.00
Explosives @ $3.60 per foot	720.00
Track @ $1.10 per foot	220.00
2 Switches @ $15.00/2 :: 30/2	15.00
Pipe and Fittings @ $0.50 per foot	100.00
Miscellaneous Tools @ $0.50 per foot	100.00
Equipment Depreciation @ $79.50/week	675.75
Repairs and Maintenance @ $1.00 per foot.	200.00
Hoses 8.5/26 x $207.00	67.67
Total Cost.	$ 7,016.12
Timbering 24 feet @ $7.50 per foot	180.00

STAGE II -- DRIFTING ON 400 LEVEL.

300' @ 5 feet per day :: 60 days or say 13-5 day weeks.

Labor and Supervision @ $430.20 per week	$ 5,592.60
Additional Payroll Cost -- 15% of the above	838.89
Fuel @ $65.00 per week	845.00
Drill Steel and Bits @ $0.80 per foot	240.00
Explosives @ $3.50 per foot	1,050.00
Track @ $1.10 per foot	330.00
Pipe and Fittings @ $0.50 per foot	150.00
Hose @ 13/26 x $207.00	104.00
Miscellaneous Tools @ $0.50 per foot	150.00
Equipment Depreciation @ $79.50 per week	1,033.50
Repairs and Maintenance @ $1.00 per foot	300.00
Total Cost	$ 10,633.99
Timbering 40 feet @ $7.50 per foot	300.00
30 samples assayed @ $5.00 per sample	150.00

SUMMARY OF DRIFTING AND CROSSCUTTING

300 Level	440'	$ 14,914.64
400 Level	200'	7,016.12
400 Level	300'	10,633.99
Total	940'	$ 32,564.75

32,564.75/940 :: $34.65 per foot Say $35.00 per foot.

Stage I - Drifting on 300 Level - 440' - 18 weeks

Labor @ $430.20/week	$7,743.60
Admin. Payroll 15% of Labor	1,161.54
Fuel @ $65.00/week	1,170.00
Drill Steel + Bits @ $0.80/ft.	352.00
Explosives @ $3.50/ft.	1,540.00
Pipe + Fittings @ $0.50/ft (½ value)	220.00
Equipment Depreciation $79.50/week =	1,431.00
Air Hose @ 18/26 x 20'	145.00
Jacks @ rental = 1.20/2 value = 0.60 / 0.50 / 1.10	484.00
Lubricants 15/2 = $7.50	7.50
Repairs + Maintenance @ $1.00/ft.	440.00
Misc. Tools @ $0.50/ft.	220.00
	$14,914.64
	= $33.90/ft.
Timber 50' @ $7.50/ft.	375.00
440' or ±	$0.85/ft.
30 samples @ 5.00 ea	150.00
	$15,439.64
Total Cost/ft.	$35.09

Depreciation - Equipment / Week

1 Granby Loco.	$13.80
1 Eimco Loader	7.70
1 Air-Powered Hoist.	4.60
10 Mine Cars	3.80
1 Compressor	11.50
1 Diesel Motor	15.40
2 Pick-up Trucks	8.30
4 Drills	7.20
2 Transformers	3.80
1 Loco Battery	3.40
	$79.50/week

71.80
7.70
79.50

8	8
8	8
7	7
5	5
0	0
9	9
5	5

(3 men)
@ 531.50
5,846.50

Stage II Sinking Wings — 105' = 11 weeks @ 632.80 (4 men)

Labor @ $432.20/week (2 men)	$4,752.20	6,960.80
Add. Payroll, Taxes etc 15% above	709.83	
Fuel @ $65.00/week	715.00	
Drill Steel & Bits @ $0.80/ft.	84.00	
Explosives @ $4.00/ft.	420.00	
Hanging Rods @ $1.00/ft.	105.00	
Timber @ $9.50/ft.	997.50	
Pipe & Fittings @ $0.65 for Air, $0.35 for Water for stage 1.00/ft. = 0.50/ft.	53.00	4,047.38
Equipment Depreciation @ 71.80 (mo.)	789.80	
Repairs & Maintenance @ $1.00/ft	105.00	
3-1" Air Hose 50' @ $0.88 = 150 x 0.88 = $132.00, 3 Water Hose 50' @ $0.50 = 0.50 x 150 = $75.00 — Total of $207.00 depreciate over 6 mo. = 207/6 = $35.00/mo. for Last 11/26 x 207	87.60	
	$8,779.58	$11,008.18
105' of sinking, cost/foot	$83.62	$104.84
(over for Depreciation)	9,913.23	94.41/ft.

Depreciation

Per Week

1 Mancha Loco	$13.80
1 Locomotive Battery	3.40
2 Transformers.	3.80
4 Rock Drills	7.20
Air-Powered Hoist	4.60
10 mine Cars.	3.80
1 Compressor	11.50
2 Trucks	8.30
1 Diesel Engine	15.40
	$71.80

105	x 94	9870.00
2800	x 35	98000.00
3000	x 35	105000.00
6	x 7.5	1440.00
30	x 5	150.00
		213660.00

55	7.5	412.5
2800	35	98000
45	8	360
		98772.5

187.50		
3000		
		3187.50

94	7.5	705
3000	35	105000
45	8	360
		106065

400 Level.

Stage II — Crosscutting — 200' — 8½ weeks

Air Hose etc. 8.5/26 × 207	67.67
Labor @ $430.30/week.	$3,656.70
Additional payroll cost - 15% of labor	548.50
Fuel @ $65.00/week	552.50
Drill Steel & Bits @ $0.80/ft.	160.00
Explosives @ $3.60/ft.	720.00
Racks @ $1.10/ft. counting salvage	220.00
2 Switches @ $15.00/2 for salvage	15.00
Pipe & Fittings @ $0.50/ft. counting salvage	100.00
Misc. Tools @ $0.50/ft.	100.00
Equipment Depreciation $79.5/week	675.75
Repairs & Maintenance @ $1.00/ft.	200.00
	$7,016.12
	$35.08/ft.
Timbering 25' @ $7.50/ft.	187.50
	$7,203.62
	$36.02/ft.

Drifting — 400 Level — 300' — 13 weeks.

Hoists $\frac{13}{26} \times 207$	104.00
Labor @ $430.20/week.	5,592.60
additional payroll cost - 15% Labor	838.89
Fuel @ $65.00/week.	845.00
Drill Steel + Bits @ $0.80/ft.	240.00
Explosives @ $3.50/ft.	1050.00
Grade @ $1.10/ft.	330.00
Pipes + Fittings @ $0.50/ft.	150.00
Miscell. Tools @ $0.50/ft.	150.00
Equipment Depreciation @ $79.50/week.	1,033.50
Repairs + Maintenance @ $1.00/ft	300.00
	$10,633.99
	$35.45/ft.
40' Timbering @ $7.50/ft.	300.00
	$10,933.99
	$36.45
30 Samples @ $5.00 ea.	150.00

Total Cost

	15,439.64
	7,203.62
	10,933.99
	9,913.23
Grand Total	$43,490.48

MME Form 7
(10-58)

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Date	Surname	Code
6/9	Klugescheid	500
-		

500

June 9, 1959

Memorandum

To: Associate Solicitor, Division of Minerals Resources

From: Chief, Division of Base Metals

Subject: Preparation of Contract for Docket No. OME-6015, Glen Larsen, Iron Blossom Mine, Juab County, Utah, Lead-Copper.

Will you kindly prepare a short-form Contract in accordance with the accompanying data.

W. R. Griswold

W. R. Griswold

WPKlugescheid/er
CC: Docket
Dir Read File
Chron.

43683

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
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		500

JUN 5 1959

Memorandum

To: Mr. W. R. Griswold, Chief
Division of Base Metals

From: E. D. Talbert, Acting Chief
Contract Administration and Audit Division

Subject: Docket No. OME-6015 (Lead-Copper)
Glen Larsen
Iron Blossom Mine
Juab County, Utah

On the basis of the subject applicant's May 13, 1959, statement of assets and liabilities and his correspondence with the Kamas State Bank, Kamas, Utah, The Bank of Spanish Fork, Spanish Fork, Utah, and the Home Acceptance Corporation, Provo, Utah, it appears that the applicant is financially eligible for an exploration contract.

Your attention, however, is called to the differences between the equipment listed in the financial statement and that listed for depreciation allowance in the application. A Mancha locomotive and batteries is stated at $2,000.00 on the financial statement and, less battery and transformers, is valued at $3,600.00 in the application. Also, an Eimco loader, 10 mine cars, a scraper, a double-drum hoist, and a pick-up truck are listed in the depreciation schedule as having an aggregate value of $5,200.00, but are not listed in the statement of assets.

EDTalbert/ama
June 5, 1959

Copy to: Docket
Director's Reading File
CA & A Division

43683

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

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DATE	INITIALS	CODE
5/29	G	220
6/1	Klug	500

May 28, 1959

Memorandum

To: W. R. Griswold, Office of Minerals Exploration

From: W. P. Williams, U. S. Geological Survey

Subject: Review of field examination report, OME 6015, (lead-copper), Glen Larsen, Iron Blossom Mine, Juab County, Utah

The examining team have returned a favorable report on the applicant's property. The Iron Blossom property has produced over 636,000 tons of ore. The examiners state that the proposed area of exploration is located on a strong geologic structure that is strongly mineralized.

The applicant's property was previously submitted under DMEA Docket No. 5004. The DMEA application was denied because of poor access to the old workings. Since then the applicant has re-opened extensive old workings on the 300 level.

The examining team's conclusion that significant, undiscovered ore deposits probably exist on the applicant's property appears valid. I agree further that the property warrants additional exploration.

W. P. Williams

W. P. Williams

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

May 28, 1959

Re: OME 6015; Lead-Copper, $42,928
Glen Larsen
Iron Blossom Mine
Juab County, Utah

Memorandum

To: W. R. Griswold, Office of Mineral Exploration

From: Commodity Specialist, Branch of Base Metals

Subject: Review of examination report of May 18, 1959, transmitted by the field team May 20, 1959.

After a field examination by F. B. Moore (USGS) and M. H. Howe (BM) on April 8, 1959, the examiners and Region III field team recommended a modification of the exploration proposed by the applicant. The program recommended and presumably concurred in by the applicant consists of drifting north and south 440 feet through the block of ground lying north of the Muhlstein stope on the 300 level. If this first stage work proves successful, Stage II consisting of deepening the Larsen winze 105 feet, and crosscutting and drifting 500 feet on the 400-level would follow. Such work is extimated to require a total of 49 weeks and cost about $42,928.

The field examiners concluded on the basis of the intense alteration, strong mineralization, and observed ore habits in the Iron Blossom workings, that the potentiality of the target area is well worth the proposed exploration. They studied the ore expression of the Muhlstein fissure at both ends of the block to be explored, noting it to be 3 to 6 feet of crushed rock and oxidized vein material with evidence of mineralization. They note that the proposed drift on the Muhlstein fissure (a split between the East and West veins) will be in the favorable Bluebell dolomite. The examiners also point out that rich ore shoots existed at either end of the exploration block and that the crosscuts through the block on the 200 and 400 levels leave an unexplored block 360 feet long by 200 feet high which could contain a significant tonnage in nearly vertical chimney-like shoots or as near horizontal replacements in the limestone.

In reviewing the potential of the area, I observe that the Iron Blossom zone has been mined over a lateral distance of about 10,000 feet to yield about 636,000 tons of ore at a profit of $3,525,000. If the unexplored area is average in its potential, it will because of its lesser vertical dimension contain about 7,500 tons of ore which would yield a profit of about $42,000. Inspection of the maps shows that the southern part of the mine has been far less productive than the average.

On the bases of the ore habit mapped and described, the limited size of the exploration block and the high ratio of cost to probable return I recommend the proposed exploration be denied.

O. M. Bishop

O. M. Bishop

cc: Division of Minerals
Mr. Killsgaard
Mr. Lamb
Mr. Bishop
F I L E S

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DATE	INITIALS	CODE
5/25	[illegible]	220
[illegible]		500

224 New Customhouse
Denver 2, Colorado

May 21, 1959

Mr. Glen Larsen
Eureka,
Colorado

Re: Docket No. OME 6015 (Lead-Copper)
Glen Larsen
(Iron Blossom mine)
Juab County, Utah

Dear Mr. Larsen:

Receipt is acknowledged of the financial statement submitted by you under date of May 13, 1959.

Should favorable consideration be given by the Government to your application for financial assistance in exploration work under the OME program, it would be necessary that you be able to finance the entire project cost for about the first two months, until such time as the Government would be in a position to reimburse you for 50 percent of the allowable costs as established in the contract.

Reimbursement to you of the Government's portion of allowable costs would be based on a monthly report and voucher, submitted by you at the end of the first calendar month of operations; and ordinarily, it requires from three weeks to a month after the close of the reporting period to effect reimbursement.

Very truly yours,

Original signed by
J. W. TOWNSEND

J. W. Townsend
Executive Officer
OME Field Team, Region III

JWT:jy

cc: Chm. Op. Comm. (2)
Harshman
HOWES, OME/SLC
Docket
Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
224 New Customhouse
Denver 2, Colorado
May 20, 1959

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DATE	INITIALS	CODE
5/25	C	220
5/29	HB	130
6/1	Klug.	220

Memorandum

TO: Chairman, Operating Committee, OME

From: OME Field Team, Region III

Subject: Docket No. OME 6015 (Lead-Copper) Glen Larsen (Iron Blossom mine) Juab County, Utah

Enclosed are the original and two copies of a Joint Engineering and Geologic Report dated May 18, 1959, by M. H. Howes, Mining Engineer, Bureau of Mines, and F. B. Moore, Geologist, Geological Survey, pertaining to the subject docket. Also enclosed are six extra copies each, of maps, Figures 2 and 3 for possible use in conjunction with a proposed contract. 5 of Fig. 2 6 of Fig. 3

The field examiners recommend a modified two stage program consisting of 940 ft. of crosscutting and drifting, and 105 ft. of winze sinking at a total estimated cost of $42,927.67.

We concur with the recommendations of the field examiners, and further recommend that a suitable contract be prepared, if possible, on the short form at a "Fixed Unit Cost".

In addition, to the foregoing, also enclosed are the original and one copy of a Financial Statement submitted by the Applicant.

J. W. Townsend

E. N. Harshman

Enclosures

Reviewed by
OME OPERATING COMMITTEE
5-29-59
(date)

Re Docket ome 6015 (Lead copper)

GLEN LARSEN
IRON BLOSSOM MINE
JUAB COUNTY, UTAH

ASSETS:

Cash in Bank	400.00	
Ingersoll Compressor 315CFM	3000.00	
G.M.C. 165 HP Compressor	4000.00	
Air Hoist	1200.00	
1952 Ford pick up	600.00	
2 Rock drills w/jack legs	900.00	
2 single drum hoists	700.00	
2 4X12 air receivers	800.00	
Home in Eureka, Utah	4000.00	
1200 feet 2" pipe	600.00	
800 feet rail w/ splices	1200.00	
1955 Cadilac	2000.00	
1950 Cadillac	500.00	
Mine Tools	500.00	
Mancha motor & batteries	2000.00	
TOTAL ASSETS:		$22,400.00

OME
DEPARTMENT OF THE INTERIOR
MAY 14 1959
REGION III
DENVER, COLORADO

Liabilities:

GMAC	942.88	
Conoco	302.00	
H.A.C. Loans	400.00	
Utah Power & Light	28.42	
Gould Batteries Co.	954.00	
Centennial Development Co.	300.00	
Kamas State Bank	469.00	
TOTAL LIABILITIES:		$ 3,396.30

MAY 13, 1959

Glen Larsen

EXTRA COPY
O. M. E.
RECEIVED MAY 25 1959
DATE | INITIALS | CODE

UNITED STATES
DEPARTMENT OF THE INTERIOR
FRED A. SEATON, SECRETARY

OFFICE OF MINERALS EXPLORATION
REGION III

OME
DEPARTMENT OF THE INTERIOR
MAY 20 1959
REGION III
DENVER, COLORADO

ON SITE REPORT

OME 6015

Glen Larsen

Iron Blossom No. 1 Mine

Juab County, Utah

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DATE	INITIALS	CODE
5/29	HB	130
		220

Lead-copper

Joint Engineering and Geologic Report

by

M. H. Howes, Mining Engineer
Bureau of Mines

F. B. Moore, Geologist
Geological Survey

Reviewed by
OME OPERATING COMMITTEE
5-29-59
(date)

May 18, 1959

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Introduction	1
Location and physical features	2
History and production	3
Ownership and extent	4
Present status	6
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Ore deposits	9
Proposed and recommended exploration	12
Estimated costs of recommended exploration	15
Proposed financing	20
Conclusions and recommendations	20

ILLUSTRATIONS

Figure		Follows page
1.	Location map, Glen Larsen, Iron Blossom No. 1 mine, Tintic Standard Mining Co., Juab County, Utah	2
2.	Claim map, 200 scale	21
3.	Composite plan of parts of the 200, 300, and 400 levels showing recommended exploration, Iron Blossom No. 1 mine, Juab County, Utah	21
4.	Composite map of workings, 100 scale	21
5.	200 level map, 100 scale	21
6.	400 level map, 100 scale	21

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OME 6015

GLEN LARSEN
IRON BLOSSOM NO. 1 MINE
JUAB COUNTY, UTAH

INTRODUCTION

Government aid for an exploratory project under Docket OME 6015 is requested by Glen Larsen, Eureka, Utah, in an application dated February 20, 1959. The original proposed program consists of 105 feet of winze sinking, 640 feet of drifting and crosscutting, and 210 feet of rehabilitation on the 300 and 400 levels of the Iron Blossom No. 1 mine, Juab County, Utah, at a total estimated cost of $25,936.64.

A field examination of the property was made April 8, 1959, by F. B. Moore, Geological Survey, and M. H. Howes, Bureau of Mines, to determine the feasibility of the proposed exploratory work and to appraise the estimated costs and the engineering aspects of the job. The field examiners were accompanied by Glen Larsen, applicant, and F. W. Hanson, representative of Tintic Standard Mining Co.

In the spring of 1958, application was made by the same operator for an exploratory loan for a somewhat similar proposed project as the present proposal. The application was denied at that time because of very limited access to old workings in the fissure zones. The proposed work was based on data furnished by the applicant from memory and from old maps and smelter settlement records. It appeared to the Field Team that there was insufficient virgin ground remaining in the area to

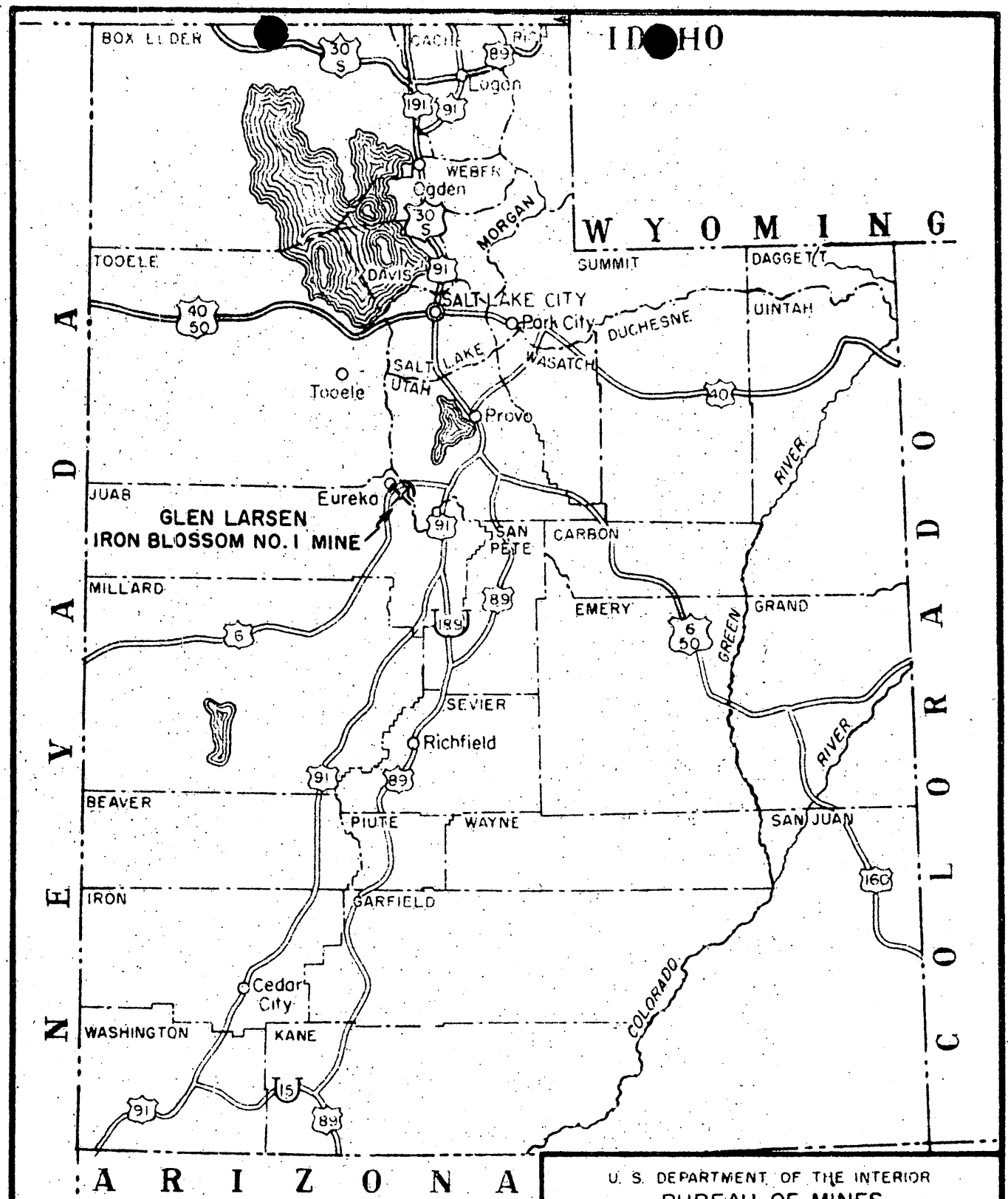
justify DMEA participation, and that the proposed work was more accurately classed as clean-up and extensions of known ore bodies.

Since the spring of 1958, the operator has driven approximately 500 feet of drifts, crosscuts, raises, and winzes, and in so doing has reopened extensive old workings on the 300 level. In conjunction with this work 1,261.111 dry tons of low-grade ore has been produced and shipped, having a gross value of $37,820.92 and a net smelter settlement value of $14,341.86 or $29.99 and $11.37 per ton, respectively. The old workings that have been reopened show intense alteration and strong mineralization in the fissure zones, which is a particularly common condition throughout the Iron Blossom ore channel. Many of the old stopes in the Iron Blossom No. 1 area show that ore deposition occurs in greater dip length than strike length on the fissures. Old workings also show that ore deposits occurring along the contacts between intrusives and limestones often split off to follow cross-fissures or limestone beds as replacement ore. There remains ample virgin ground in the proposed exploratory area to contain ore reserves of considerable size and value.

LOCATION AND PHYSICAL FEATURES

The Iron Blossom No. 1 mine lies high on the east slope of the East Tintic Mountains, in the Tintic district, approximately 4 miles southeast from Eureka, Utah, by road through Knightsville (figs. 1 and 2). Altitudes range from about 6,800 feet to over 7,400 feet.

The climate is semiarid. During summer months, days are hot and nights are cool. Winter weather is usually severe, with low temperatures not



U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Fig. 1

OME Docket No. 6015
Formerly DMEA Docket No. 5004

Location Map

GLEN LARSEN
IRON BLOSSOM NO. 1 MINE
TINTIC STANDARD MINING CO.
JUAB COUNTY, UTAH

ENGINEER: M. H. HOWES	DATE: MAY 27, 1958
TRACED: MAY, 1958; A.P.T.S.	1500-1236-G
CHECKED:	

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uncommon. Prevailing winds with moderately heavy snowfalls cause continuous snow drifting. However, the roads are kept open by periodic blading.

Vegetation consists largely of desert plants, of which sagebrush is most common.

HISTORY AND PRODUCTION

Production began in the Iron Blossom mine in 1908, was continuous through 1930, and thereafter has been intermittent to the present time. The property was originally acquired by the Jesse Knight interests and operated by this group until 1925, when the mine was purchased by Tintic Standard Mining Co. A few years before the above transaction was made, when ore deposits were thought to be nearing exhaustion, the Knight interests changed the method of mine operation from production by company-employed miners to production by block-lessees. This system, because of its incentive nature, proved to be highly successful, not only in ore production, but in finding and developing new ore. This policy has been followed by the Tintic Standard Mining Co. to the present time, with similar successful results.

It is reported that total known production from the Iron Blossom property is in excess of 636,000 dry tons of crude ore from which dividends amounting to $3,525,000 were paid.

OWNERSHIP AND EXTENT

The property to be included in this project consists of six patented lode mining claims in the Iron Blossom No. 1 mine area (fig. 2). The claims are owned by the Tintic Standard Mining Co., Walker Bank Building, Salt Lake City, Utah, and are listed as follows:

Una lode	U.	S.	Mineral	Survey	No.	4548
Little Chief lode	"	"	"	"	"	5171
Excelsior lode	"	"	"	"	"	5171
Mild Winter lode	"	"	"	"	"	5171
Iron Blossom lode	"	"	"	"	"	Lot No. 115
Little Giant lode	"	"	"	"	"	5171 (limited

to that portion which lies southerly of a straight line drawn from Corner No. 2 to Corner No. 5 of said Little Giant lode, said line having a course and distance of S. 67° 17' E., 599.1 feet).

The above-listed property is held by Glen Larsen, Eureka, Utah, under Lease and Agreement with Tintic Standard Mining Co., dated April 1, 1958. The exterior boundary of this tract is described as follows:

Beginning at Cor. No. 3, Sur. No. 4548, Una lode, and running thence S. 40° 05' W. 1,208.8 feet to Cor. No. 4 of said Una lode, thence S. 31° 17' W 152.4 feet to Cor. No. 5 of said Una lode, thence N. 63° 45' W. 266.8 feet to the point of intersection with line 6-5, Sur. No. 4519, March lode, thence

along said line 6-5 of said March lode, thence

N. 47° 42' W. 125.2 feet to Cor. No. 5 of said March lode on line 1-4, Sur. No. 4519, Eastern lode, thence

N. 36° 17' E. 140.0 feet to Cor. No. 4 of said Eastern lode, thence

N. 42° 42' W. 200.0 feet to Cor. No. 3 of said Eastern lode, identical with Cor. No. 5, Sur. No. 4519, Turk lode, and with Cor. No. 1, Sur. No. 5171, Little Chief lode, thence

N. 47° 42' W. 200.0 feet to Cor. No. 4 of said Turk lode, on line 4-1 of Lot No. 85, Governor lode, thence

N. 37° 50' E. 52 feet, more or less, to Cor. No. 1 of said Governor lode, thence

N. 49° 00' W. 200.0 feet to Cor. No. 2 of said Governor lode, thence

S. 37° 50' W. 599.9 feet to the point of intersection with line 1-2 of said Little Chief lode, thence

S. 75° 39' W. 173.6 feet to Cor. No. 2 of said Little Chief lode, on line 4-3, Lot No. 115, Iron Blossom lode, thence

S. 40° 15' W. 123.0 feet, more or less, to Cor. No. 4 of said Iron Blossom lode, thence

N. 63° 50' W. 190.0 feet, more or less, to Cor. No. 1 of said Iron Blossom lode, thence

N. 39° 36' E. 910.0 feet, more or less, to Cor. No. 1, Sur. No. 5171, Mild Winter lode, thence

N. 39° 27' W. 39.9 feet to Cor. No. 2 of said Mild Winter lode, thence

N. 13° 28' E. 882.6 feet to Cor. No. 3 of said Mild Winter lode, thence

S. 80° 51' E. 138.2 feet to Cor. No. 4 of said Mild Winter lode, identical with Cor. No. 5, Lot No. 244, Wolf lode, thence

N. 36° 40' E. 577.0 feet to Cor. No. 5 of said Mild Winter lode, identical with Cor. No. 6 of said Wolf lode and with Cor. No. 2, Sur. No. 5472, Hemitite lode, thence

S. 39° 27' E. 452.5 feet to Cor. No. 6 of said Mild Winter lode, identical with Cor. No. 1 of said Hemitite lode and with Cor. No. 3, Sur. No. 5171, Excelsior lode, thence

S. 63° 50' E. 6.2 feet to the point of intersection with line 3-4 of Lot No. 122, La Bonta lode, thence

S. 18° 35' W. 92.6 feet to Cor. No. 4 of said La Bonta lode, thence

S. 89° 43' E. 210.6 feet to Cor. No. 5 of said La Bonta lode, identical with Cor. No. 4 of said Excelsior lode and with Cor. No. 2, Sur. No. 5171, Little Giant lode, thence

S. 67° 17' E. 599.1 feet to Cor. No. 5 of said Little Giant lode, thence

S. 75° 35' E. 154.4 feet to Cor. No. 5 of said Little Chief lode, thence

S. 49° 15' W. 608.9 feet to the point of intersection with line 2-3 of said Una lode, thence

S. 63° 45' E. 384.6 feet to Cor. No. 3 of said Una lode, the point of beginning.

The above-described property lies in sections 29 and 30, T. 10 S., R. 2 W., S.L.B. and M., in Juab County, Utah.

PRESENT STATUS

The proposed exploratory program will be conducted from the Larsen winze, which is located approximately 310 feet from the portal of the Iron Blossom No. 1 Tunnel (fig. 3). The extensive mine workings of the Iron

Blossom No. 1 mine area (fig. 4), which at present are inaccessible, will be reopened on the 400 level as work progresses from the Larsen winze, as they were on the 300 level by work performed during the past year.

Existing usable facilities that will be devoted to the exploratory work are:

Compressor house

Change house

Wooden ore bin

Diesel-powered compressor

Air-driven hoist

Mine cars

Mine track in the tunnel and already installed on the 300 level

Rock drills

Battery locomotive

Loader

Miscellaneous small tools

Oresdiscovered in the project area, after being mined and transported to the mine ore bin, will be trucked 3-1/4 miles to Eureka Summit loading ramp on the D. and R. G. R. R., and then hauled by train to Salt Lake Valley smelters.

Ample labor is available in Eureka, Utah.

Materials, supplies, and equipment not now on hand at the property can be obtained in Eureka or Salt Lake City.

GEOLOGY

The Tintic mining district is underlain by a series of sedimentary rocks at least 13,000 feet thick which range in age from Cambrian to Mississippian. The stratigraphic section was established by Lindgren (U.S.G.S. Prof. Paper 107, p. 22) as follows:

Age	Name	Thickness in feet
Upper Miss.	Humbug formation	250
Lower Miss.	Pine Canyon ls. x	1,000
" "	Gardner dolomite x	435-700
" "	Victoria quartzite	0-85
Unconformity		
Devonian	Missing in the mining district proper	
Ordovician	Bluebell dolomite x	700-1,100
Lower Ordovician	Opohonga ls. x	835+
" "	Ajax limestone x	570
Unconformity		
Upper Cambrian	Opex dolomite x	390
Middle Cambrian	Cole Canyon dol. x	510
" "	Bluebird dolomite x	175-200
" "	Herkimer ls. x	235
" "	Dagmar ls. x	100
" "	Teutonic ls. x	556
" "	Ophir fm. x	355
Lower Cambrian	Tintic quartzite x	6,000+

x Productive formations in the Tintic district.

Igneous rocks present are mostly effusive and include rhyolite, monzonite, latites, and andesites. Monzonite or monzonite porphyry intrudes the sediments as small stocks and dikes in a few places.

The sedimentary rocks at Tintic are folded into a large asymmetric syncline with a steep west limb and a more gently dipping east limb. The axis of the syncline is northerly in trend and passes through the eastern part of the district in the vicinity of the Iron Blossom No. 1 mine.

Faulting is extensive but too complicated to allow for simple generalization. Faults of east trend appear most numerous; large faults of northeast trend are prominent; and faults of northerly trend are known in underground workings but, being parallel to the beds, are obscure at the surface.

ORE DEPOSITS

The Tintic ore deposits occur in both igneous and sedimentary rocks; however, most of the production of the district has come from certain limestone beds. The ore bodies lie along fissure zones but form bedded replacement deposits in the limestones. The igneous rocks contain northeasterly veins, of steep dip, "some of which have yielded considerable amounts of ore from their oxidized zones above the water table." Of the limestones, the Bluebell dolomite is the most favorable host rock; it contains large ore bodies in many places throughout the district. Considerable quantities of ore have been produced from other limestones in limited areas as follows: (1) Pine Canyon limestone in the eastern part of the district; (2) Opex dolomite and Ajax limestone in the Bullion Beck

group; (3) Gardner dolomite in the Southern Iron Blossom area; (4) Opohonga limestone in the Grand Central mine. In the Iron Blossom No. 1 mine most of the ore occurs in the Bluebell dolomite.

Four vein zones or "ore runs," of northerly trend, are recognized in the limestones. From west to east they are: (1) Gemini; (2) Mammoth; (3) Godiva; and (4) Iron Blossom. The Iron Blossom No. 1 mine is in the southern part of the Iron Blossom zone which has been mined for a lateral distance of over 10,000 feet (fig. 4).

Most of the Iron Blossom No. 1 workings are currently inaccessible; therefore, much of the following data is based on the operator's knowledge of the area or on Professional Paper 107. The Iron Blossom ore zone, which contains bedded replacement ore bodies in and north of the Iron Blossom No. 3 mine, becomes more vein-like in character in the Iron Blossom No. 1 area. Still farther south in the area of the Governor and Dragon mines, it is classed as a vein type deposit by Lindgren. The operator reports that the zone contains four principal strands in the Iron Blossom No. 1 mine. From east to west they are: (1) a contact (No. 1 East) zone between rhyolite and limestone which in 1958 was being mined on the 300 level; (2) the East vein of Lindgren, locally called the Gold fissure, which produced from the Gold stope; (3) the west or "main" vein which contains most of the stopes on the 500 and 600 levels; and (4) a zone at the contact of limestone with a porphyry dike. A fissure which lies between the East and West veins and which appears to be a split from the West vein, is a target for the proposed exploration.

The contact ore body (No. 1 East) recently mined on and below the 300 level is irregular in form but generally is from 10 to 12 feet wide. The ore is highly oxidized and consists of a soft, cellular mass in which cerussite is the chief ore mineral. Silver is present in considerable amounts probably as secondary minerals or possibly carried by other minerals. The ore is heavily stained with limonite and, locally, with manganese oxide. Small amounts of pyrite are reported by the operator and traces of copper stain occur in places. The zinc content is low. Gangue minerals are quartz and barite.

The ore throughout the Iron Blossom zone is generally uniform in character although in places in the Iron Blossom No. 1 mine the copper-gold content is higher and the lead-silver content is lower than in mines farther north. The vein ore in mines to the south is less plentiful and of lower grade, indicating that the Iron Blossom No. 1 mine is in a transition zone. Shipments of ore made about 1927 may indicate the tenor to be expected in the areas proposed for exploration. Ore from the Layshon stope contained 90 to 213 ounces silver per ton, 11 percent lead, and 0.35 ounce gold; ore from the Muhlstein stope contained 18 to 70 ounces of silver per ton, 1 to 11 percent copper, and up to 20 percent lead. The operator reports that ore produced along the contact zone in the mine was valued at $2,000,000.

PROPOSED AND RECOMMENDED EXPLORATION

The five projects proposed by the applicant actually involve only two targets, one on the 400 level and one on the 300 level (fig. 3). The applicant's 400 level project (Project No. 3) is designed to undercut a known ore occurrence which has been explored by old workings on two or possibly three sides in addition to having been stoped to an unknown extent from a sub-level above the 400 level. The sub-level is reported by the operator to be at 340 feet or 60 feet above the 400 level. A composite plan map furnished by the applicant shows two stopes at different levels with a combined stoped area (in plan) of more than 100 square sets. The ore at Project 3 area is rather low-grade "mill dirt" occurring at the contact of the Bluebell dolomite and rhyolite. Although a considerable tonnage of "mill dirt" may be present in the area, the project (3) is mine development and not exploration and it is recommended that it be denied. The applicant's projects 1 and 2 merely involve gaining access to the 400 or project 3 level. Four other possible targets on the 400 level, pointed out but not requested for assistance by the applicant in a letter of February 20, 1959, are completely unknown factors as regards accessibility, geologic occurrence, or extent and location of old workings. The 400 level is not accessible at the present time.

The applicant's 300-level projects 4 and 5 are both on the same fissure, called the Muhlstein fissure for purposes of identification in this report. Project 4 comprises drifting 360 feet northerly from the north edge of the Muhlstein stope and project 5 comprises drifting 80

feet (to within 100 feet of property boundary) southerly from a point 80 feet south of the stope (fig. 3).

The Muhlstein fissure is accessible at three places: (1) at the starting point of project 4, (2) at the end point of project 4 and (3) at the starting point of project 5. The fissure is similar at all three places. It consists of 3 to 6 feet of crushed rock and oxidized vein material. Manganese stain, copper stain, and vein quartz, all favorable indicators of ore, are fairly conspicuous. The chief ore minerals are lead carbonate (cerussite) and secondary silver minerals. Moderate amounts of copper and, in places, gold are also present.

The starting point of both the northerly and southerly drifts is in a highly mineralized area. In a distance of less than 100 feet east from the Muhlstein stope are two other stopes--the Muhlstein-Higgenson and the Gold--which are on parallel fissures or on splits from the Muhlstein or the East fissure. The ore bodies in this area form in nearly vertical shoots in contrast to the horizontal (replacement type) shoots to the north. The primary control here appears to be the fissures although favorable limestone beds can increase the amount of fissure ore. Both walls in the proposed drifts will be Bluebell dolomite, a favorable rock. At the north end of the project several small stopes mark the south end of a long horizontal ore shoot.

Although the Muhlstein fissure has been crosscut on the 200 and 400 levels, an unexplored block of ground 360 feet long by 200 feet high remains. Undiscovered ore bodies in the area may be either horizontal or vertical as they would be in the transition zone. If horizontal (replacement

type), the 300 level appears to be about the optimum level stratigraphically on which to explore in the area. If vertical, the 200 and 400 level crosscuts still leave the fissure essentially unexplored. In other words, except for the limited exploration in the Muhlstein stope area, the Muhlstein fissure--apparently a split off the West fissure--has not been explored by drifting south of the point chosen for the north end of the project (fig. 4). It is therefore recommended that the applicant's request to drift northerly and southerly (Projects 4 and 5) along the Muhlstein fissure from the Muhlstein stope area for a combined distance of 440 feet be approved.

In the event that significant quantities of ore-grade material are discovered on the 300 level, further exploration on the 400 level will be warranted. A Stage II is therefore recommended, contingent on Stage I results. Stage II would comprise deepening the Larsen winze 105 feet, crosscutting approximately 200 feet northwesterly to the Muhlstein fissure, and drifting 300 feet northerly and southerly along the fissure (fig. 3).

The applicant has stated that sinking a winze on the Muhlstein fissure under Stage II is not practical from a mining standpoint and would not be acceptable. He is undoubtedly right. The recommended Stage II program is acceptable to the applicant. However, somewhat better Stage I results will be required to justify the Stage II program than would be required to sink a Stage II winze on the fissure. The recommended exploration is summarized below.

Stage I		
Drifting (from Muhlstein stope area)		
Northerly	360 feet	
Southerly	80 feet	
Total		440 feet
Stage II		
Sinking winze (deepen Larsen winze)		105 feet
Crosscutting northwesterly (400 level)		200 feet
Drifting on 400 level		300 feet

The locations of the recommended exploration are shown on figure 3.

Samples should be taken at intervals of not more than 10 feet when drifting in ore or material approaching ore in grade. The samples should be split; one-half should be assayed for gold, silver, copper, lead, and zinc; the remaining half should be retained for use by the Government. It is estimated that 60 samples will be required, 30 in each stage.

ESTIMATED COSTS OF RECOMMENDED EXPLORATION

A careful check of the estimated costs submitted in the application indicates that they are reasonable and fair. Although the figures are generally accurate, a few minor corrections have been made and incorporated in this report.

Time Schedule of Projects

Item	Distance (feet)	Average daily progress (feet)	Weeks Start	Weeks Finish	Weeks Total
Stage I					
Drift north and south on Muhlstein fissure on 300 level	440	5	1	18	18
Stage II					
Larsen winze	105	2	19	29	11
Crosscut 400 level	200	5	30	37	8
Drifting north and south from crosscut 400 level	300	5	38	49	12

Estimate of Costs

(a) No independent contracts

(b) Personal services

1 hoistman at $20.26 per day	$ 20.26
1 topman-trammer at $20.26 per day	20.26
2 miners at $20.26 per day	40.52
Engineer-geologist at $100.00 per month, $25 per week, $5 per day	5.00
Labor and engineer, per day	$ 86.04
Labor and engineer, per week	$430.20

(c) Operating materials and supplies

Drill steel and bits per foot of winze or drift	$ .25	0.80 ? Lars.
Timber and hanging rods per foot of winze	9.00	10.50
Explosives per foot of winze or drift	4.00	
Miscellaneous hand tools (ax, hammer, pick, shovel, saw, wrenches, square) per foot of winze or drift	.50	
Fuel for diesel engine (per week)	50.00	
Oils for engine, compressor, drills, loader (per week)	5.00	
Gasoline for trucking water and supplies (per week)	10.00	
Total for fuel, oils, gasoline (per week)	$ 65.00	

(c) Operating materials and supplies (continued)

Mine track (12-lb. rails, splices, bolts, spikes, ties) per foot of drift	$ 1.69 1.71
Track switch, regular, each	15.00
Track switch, crossover, each	25.00
2-inch black pipe for compressed air per foot of winze or drift	.55
Couplings, each	.85
Tees, each	1.50
Unions, each	1.70
Elbows, each	1.05
Valves, plug cock, each	13.00

(d) Operating equipment, supplied by applicant

	Present value	Depreciation per month	Charge per week
1 Mancha B locomotive, with charger, less battery and transformers	2,000 $ 3,600	$ 60.00	$ 13.80
1 Eimco 12 B loader	2,000	35.00	7.70
1 air-powered hoist	1,200	20.00	4.60
10 mine cars	1,000	17.00	3.80
1 compressor, 315 c.f.m.	3,000	50.00	11.50
1 diesel engine, 165 hp.	4,000	67.00	15.40
1 scraper	100	1.50	.40
1 double-drum slusher hoist	600	10.00	2.30
2 single-drum tuggers	700	13.00	2.70
1 pickup truck, 1952 Ford	600	10.00	2.30
1 pickup truck, 1957 GMC	1,500	25.00	6.00
2 rock drills with jacklegs	900	15.00	3.40
Totals	$19,200	$323.50	$73.90

Operating Equipment to be Purchased

1 locomotive battery	$ 900	$ 15.00	$ 3.40
2 transformers, 5,000-440/220 volt (smaller sizes not available for this voltage)	1,000	17.00	3.80
2 rock drills with jacklegs	1,000	17.00	3.80
Totals	$ 2,900	$ 49.00	$11.00
Total cost of operating equipment	$22,100	$372.50	$84.90

(e) Initial rehabilitation and repairs — None

(f) New buildings, fixtures, installations — None

(g) Miscellaneous

Estimated cost of repairs and maintenance per foot of winze and drift — $ 1.00

60 assays for lead, zinc, copper, gold, and silver at $5.00 per assay or for 920 feet per foot of drift $0.33 — 300.00

Compensation insurance, F.I.C.A. tax, unemployment compensation tax, occupational disease compensation insurance, liability insurance, and vacation pay is calculated at the rate of 15 percent of the labor cost.

Summary of costs

Stage I - Drifting on 300 level - 440 feet - 18 weeks

Labor at $430.20 per week	$ 7,743.60
Additional payroll cost, 15 percent of labor	1,161.54
Fuel, etc., at $65.00 per week	1,170.00
Drill steel and bits at $0.25 per foot	110.00 low
Explosives at $4.00 per foot	1,760.00
Timber, 10 percent of distance, 44 feet at $3.60 per foot	1,584.00 X wrong 158.40
Track at $1.69 per foot	743.60
Switch	15.00
Pipe and fittings at $0.65 per foot	286.00
Miscellaneous tools at $0.50 per foot	220.00
Equipment depreciation at $84.90 per week	1,528.20
Repairs and maintenance at $1.00 per foot	440.00
Assays at $0.33 per foot	145.20 X
Water line ?	
Total for Stage I	

440) ~~$16,907.14~~ | 38.42

440) 15,481.54 | 35.19

Timbering @ $7.50/foot.

Stage II - Sinking Winze - 300 to 400 Level - 105 feet - 11 weeks

Labor at $430.20 per week	$ 4,732.20		
Additional payroll cost, 15 percent of labor	709.83		
Fuel, etc., at $65.00 per week	715.00		
Drill steel and bits at $0.25 per foot	26.25		
Explosives at $4.00 per foot	420.00		
Timber and hanging rods at $9.00 per foot	945.00		
Pipe and fittings at $0.65 per foot	68.25		
Miscellaneous at $0.50 per foot	52.50		
Equipment depreciation at $84.90 per week	933.90		
Repairs and maintenance at $1.00 per foot	105.00		
Total for sinking winze		105'	$ 8,707.93	82.93

Crosscutting - 400 Level - 200 Feet - 8 weeks

Labor at $430.20 per week	$ 3,441.60		
Additional payroll cost, 15 percent of labor	516.24		
Fuel, etc., at $65.00 per week	520.00		
Drill steel and bits at $0.25 per foot	50.00	$160.00	
Explosives at $4.00 per foot	800.00		
Timber, 10 percent of distance, 20 feet at $3.60 per foot	72.00		
Track at $1.69 per foot	338.00		
2 switches at $15.00 each	30.00		
Pipe and fittings at $0.65 per foot	130.00		
Miscellaneous tools at $0.50 per foot	100.00		
Equipment depreciation at $84.90 per week	679.20		
Repairs and maintenance at $1.00 per foot	200.00		
Assays at $0.33 per foot	66.00		
Total for crosscutting		200'	$ 6,943.04	34.72

Drifting - 400 Level - 300 Feet - 12 Weeks

Labor at $430.20 per week	$ 5,162.40		
Additional payroll cost, 15 percent of labor	774.36		
Fuel, etc., at $65.00 per week	780.00		
Drill steel and bits at $0.25 per foot	75.00		
Explosives at $4.00 per foot	1,200.00		
Timber, 10 percent of distance, 30 feet at $3.60 per foot	108.00		
Track at $1.69 per foot	507.00		
Pipe and fittings at $0.65 per foot	195.00		
Miscellaneous tools at $0.50 per foot	150.00		
Equipment depreciation at $84.90 per week	1,018.80		
Repairs and maintenance at $1.00 per foot	300.00		
Assays at $0.33 per foot	99.00		
Total for drifting		300'	$10,369.56	34.56
Total for Stage II			$26,020.53	

Tabulation of Costs

	Distance (feet)	Cost	Cost per foot
Stage I, drifting on 300 level	440	$16,907.14	$38.43
Stage II			
Sinking winze 300 to 400 level	105	8,707.93	82.93
Crosscutting 400 level	200	6,943.04	34.72
Drifting 400 level	300	10,369.56	34.56
Total cost Stages I and II		$42,927.67	

PROPOSED FINANCING

The applicant is prepared to furnish $21,463.84, in the form of labor and equipment in the proposed exploratory project, which is 50 percent of the total estimated cost of $42,927.67 in accordance with the regulations on Government participation, as stated in section 301.9 of Title 30 - Mineral Resources, Chapter III - Office of Minerals Exploration, Department of the Interior.

CONCLUSIONS AND RECOMMENDATIONS

The ore bodies in the Iron Blossom ore zone form bedded and, in the Iron Blossom No. 1 mine area, vein-type deposits along northerly-trending fissures in the Bluebell dolomite and the Pine Canyon limestone. The bedded deposits which occur chiefly to the north of the Iron Blossom No. 1 mine have remarkable lateral continuity along favorable horizons. The ore bodies in the proposed exploration area are more closely related to

the vein type and, in contrast, form in nearly vertical shoots. The vertical shoots appear to occur in groups along parallel or branching fissures which make up the main Iron Blossom zone. The proposed exploration along the Muhlstein fissure on the 300 level covers most of the interval between two groups of ore shoots. An ore shoot on the West vein, from which the Muhlstein fissure is believed to branch, may indicate the pressence of another group of ore shoots about in the middle of the exploration area (fig. 3).

Because the proposed 300 level exploration is on a strong structure in a well mineralized area with indications, if the group pattern is consistent, that an ore shoot may be present along the line of exploration, it is recommended that a two-stage program as outlined above be approved.

OFFICIAL FILE COPY
O. M. E.
RECEIVED MAY 11 1959

DATE	INITIALS	CODE
5/11	a	220
5/12	~~TWT~~	500

224 New Customhouse
Denver 2, Colorado

May 8, 1959

Mr. Glen Larsen
Eureka,
Utah

Re: Docket OME 6015 (Lead-Copper)
Glen Larsen
(Iron Blossom mine)
Juab County, Utah

Dear Mr. Larsen:

To permit further processing of the referenced application, your prompt attention should be given the matter of forwarding a financial statement of your assets and liabilities, as requested from you in our letter of April 20, 1959.

Very truly yours,

Original signed by
J. W. TOWNSEND

J. W. Townsend
Executive Officer
OME Field Team, Region III

JWT:jy

cc: Chm. Op. Comm. (2)
Harshman
Howes, OME/SLC
Docket
Chron.

OFFICIAL FILE COPY
O. M. E.
RECEIVED APR 23 1959

DATE	INITIALS	CODE
4/23	G	220
4/24	alt.	500

224 New Customhouse
Denver 2, Colorado

April 20, 1959

Mr. Glen Larsen
Eureka,
Utah

Re: Docket OME 6015 (Lead-Copper)
Glen Larsen
(Iron Hitesson mine)
Juab County, Utah

Dear Mr. Larsen:

To permit further processing of the referenced application, please forward a financial statement of your assets and liabilities.

The request for the financial statement must not be construed as assurance that favorable action by the Government will be taken on your application.

Very truly yours,

Original signed by
J. W. TOWNSEND

J. W. Townsend
Executive Officer
OME Field Team, Region III

JWT:jy
cc: Chm. Op. Comm. (2)
Harshman
Howes, OME/SLC w/copy of memo.
Docket OME 6015 from Harshman, dtd. 4/15/59
Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
224 New Customhouse
Denver 2, Colorado

April 7, 1959

OFFICIAL FILE COPY
O. M. E.
RECEIVED APR 13 1959

DATE	INITIALS	CODE
4/13	C	220
4/14	alt	500

Memorandum

To: Chairman, Operating Committee, OME

From: Executive Officer, OME Field Team, Region III

Subject: Docket OME 6015 (Lead-Copper) Glen Larsen (Iron Blossom mine) Juab County, Utah

In reference to matter discussed in the last paragraph of your letter of March 27, 1959, enclosed is a copy of the applicant's letter dated April 2, 1959, to The Bank of Spanish Fork, requesting a $15,000.00 loan and the bank's reply of April 3, denying the loan request.

J. W. Townsend

Enclosures

OFFICIAL FILE COPY
O. M. E.
RECEIVED APR 3 1959

DATE	INITIALS	CODE
4/3	C	220
4/6	OU	500

224 New Customhouse
Denver 2, Colorado

March 31, 1959

Mr. Glen Larsen
Eureka,
Utah

Re: Docket OME 6015 (Lead-Copper)
Glen Larsen
(Iron Blossom mine)
Juab County, Utah

Dear Mr. Larsen:

Your application, Docket OME 6015, has been referred to this office for appropriate action, and the matter has in turn been referred to OME field examiners who may contact you regarding the matter.

In the application you state that you propose to furnish your share of the exploration costs by labor and the use of equipment. If favorable consideration should be given your application by the Government, it would be necessary that you be able to finance the entire project costs for about the first two months before the Government would be in a position to reimburse you for the allowable costs of work performed during the first calendar month of operations.

In reference to the H.A.C. Corporation letter submitted with your application, we have been advised that the letter cannot be accepted as a bona fide refusal since the Corporation's denial of your request for a loan based its refusal on the fact that they are limited in loan amount to $5,000.00. Therefore, please submit another bank letter containing more conclusive facts.

Very truly yours,

Original signed by
J. W. TOWNSEND

J. W. Townsend
Executive Officer
OME Field Team, Region III

JWT:jy

cc: Chm. Op. Comm. (2)
Harshman
Howes
Docket OME 6015
Chron.

224 New Customhouse
Denver 2, Colorado

March 30, 1959

OFFICIAL FILE COPY
O. M. E.
RECEIVED APR 3 1959
DATE | INITIALS | CODE
4/3 | | 220
4/6 | | 560

Memorandum

To: E. N. Harshman) w/enclosures
M. H. Howes)

From: Executive Officer, OME Field Team, Region III

Subject: Docket OME 6015 (Copper-Lead) Glen Larsen (Iron Blossom mine) Juab County, Utah

Enclosed is the following material pertaining to the subject docket:

1. Copy of MME Form 40, Application, with five maps attached.

2. Copy of Chairman, Operating Committee, OME, letter of March 27, 1959.

3. Memorandum of Review by O. M. Bishop, USBM.

4. Memorandum of Review by N. E. Nelson, USGS.

5. Routing control sheet.

A somewhat similar exploration program was proposed by the applicant under Docket DMEA 5004, which was denied by the Administrator's letter, dated June 30, 1958. For further reference to the prior docket, see the Examination Report, dated June 6, 1958.

The material is forwarded for your review and on-site examination, if indicated, and a joint report containing your recommendations in the matter.

If your review or examination results in recommendation that favorable consideration by the Government be given to the applicant's proposal, please submit ten extra copies of each map used in the joint report which show the land to be subordinated and the location and extent of recommended work in relation to property boundaries.

In reference to the fourth paragraph of the Chairman's letter, under item 2, the matter of obtaining the financial statement from the applicant will be handled by this office when recommendations relative to the proposed exploration program are known.

Original signed by
J. W. TOWNSEND

J. W. Townsend

Enclosures

JWT:jy

cc: Chm. Op. Comm. (2)
Docket OME 6015
Chron.

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
3/25	[illegible]	500
3/27	[illegible]	130
"	[illegible]	110
		~~100~~
		HB
3/30	C	220
		500

500

Memorandum

To: Executive Officer, OME Field Team, Region III

From: Chairman, Operating Committee, OME

Subject: Docket No. OME-6015 (Lead-Copper)
Glen Larsen
Iron Blossom Mine
Juab County, Utah

The cited application is being referred to your office for a field examination and recommendations. At the time of the previous application on this property (DME-5004) the Field examiners stated that very few of the workings of the project area were accessible; however, the Applicant now states that much work of rehabilitation has since been done, plus considerable new work. Hence, it would seem that a proper examination is now possible.

Copies of memoranda dated March 6 and 18, 1959, by N. E. Nelson, Geological Survey, and O. M. Bishop, Bureau of Mines, respectively, relating to the project are enclosed for your information. We are enclosing two copies of the application for the use of the Field Team.

Since the Applicant states that he proposes to furnish his share of the exploration costs by his labor and the use of his equipment, please explain to him that he should be able to finance the entire project cost for the first two months. He should understand that the Government provides no funds prior to the submission and clearance of the monthly vouchers.

If it appears that if the Field Team report will be favorable you should then advise the Applicant that a financial statement, showing net worth, assets and liabilities, should be provided, to permit further processing of the application. Of course, the Applicant should be advised that this request on your part cannot be construed as an assurance that favorable action will be taken on his application.

43683

We note that one of the bank letters (H. A. C. Corporation) bases its refusal upon the fact that they are limited in loan amount to $5,000.00. This cannot be accepted as a bona fide refusal, hence, another bank letter must be obtained.

/s/ George C. Selfridge

(HB)

Enclosures

APPROVED:

H. G. Iverson (HB)
Member, Bureau of Mines

N. E. Nelson (HB)
Member, Geological Survey

WRGriswold/er 3/23 & 25/59
Copy to: Docket
Dir Read File
Op. Committee
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Chron.

OME-6015

3/24/59

Mrs. Gwin.

Applicant's bank is against the loan limit of $5,000 so applicant should buy another Bank. Also, ~~[illegible]~~ ~~[illegible]~~ Fuel payment of [illegible] to Fuel Tank is not a loan.

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
3/23		500
		500
3/24		130
		110
		100
		HB
		220
		500

500

Memorandum

To: Executive Officer, OME Field Team, Region III

From: Chairman, Operating Committee, OME

Subject: Docket No. OME-6015 (Lead-Copper)
Glen Larsen
Iron Blossom Mine
Juab County, Utah

The cited application is being referred to your office for consideration, a field examination of the property if warranted, and recommendations.

Copies of memoranda dated March 6 and 18, 1959, by N. E. Nelson, Geological Survey, and O. M. Bishop, Bureau of Mines, respectively, relating to the project are enclosed for your information. We are enclosing two copies of the application for the use of the Field Team.

A

As the Applicant states that he proposes to furnish his share of the exploration cost by labor and of use of equipment owned by him, he should be advised that he should be able to completely finance the work for the first two months in the event that you should consider the application favorably. The reason for this, as you know, is that it takes from two weeks to a month to process a voucher for payment.

If it appears that if the Field Team report will be favorable you should then advise the Applicant that a financial statement, showing net worth, assets and liabilities, should be provided, to permit further processing of the application. Of course, the Applicant should be advised that this request on your part cannot be construed as an assurance that favorable action will be taken on his application.

B

Of the previous application, DMEA-5001, the Field Team state: "At the time of the examination the only accessible workings in the project area were the No. 1 tunnel (200 level) to a point slightly beyond the Larsen winze, and the 300 level from the Larsen winze to caved area near the start of Project 5(fig.3). The proposed work is therefore based on data furnished by the applicant and that shown on old plan on section maps".

43683

In the present application, OME-6015, it is now stated: "The applicant has rehabilitated Tunnel No. 1 through a distance of about 300 feet beginning at the portal, has sunk the Larsen winze to a depth of about 100 feet below the tunnel, has reopened extensive workings on the 300 level, has driven a new drift, ("F" to "G" on Map 8 - 4) about 150 feet, connecting with the Muhlstein Stope, and has driven a new drift ("H" to "J" on Map 8-4) about 220 feet."

If you should decide to have a field examination of this project, the above mentioned should make the 300 level accessible for an examination of the proposed work on that level, and should enable the examiners to determine if the winze should be sunk, and the proposed work should be done on the 400 level. Clarify

/s/

George C. Selfridge

(JB)

Enclosures

APPROVED:

H. G. Iverson (JB)
Member, Bureau of Mines

N. E. Nelson (JB)
Member, Geological Survey

JWAlt/er 3/23/59
CC: Docket
Dir Read File
Op. Committee
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Chron.

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
3/23	[illegible]	500
	[illegible]	500
3/23	[illegible]	130
3/24	[illegible]	~~130~~
3/24	Nelson	130
		~~100~~
		~~100~~
		~~[illegible]~~
		220

500

MAR 27 1959

Mr. Glen Larsen
Eureka, Utah

Re: Docket No. OME-6015 (Lead-Copper)
Glen Larsen
Iron Blossom Mine
Juab County, Utah

Dear Mr. Larsen:

Your application for Government assistance to explore the cited property has been reviewed by the Division of Base Metals of the Office of Minerals Exploration and has been referred to:

Mr. J. W. Townsend
Executive Officer,
OME Field Team, Region III
224 New Customhouse Bldg.
Denver 2, Colorado

If the Field Team requires additional information concerning your application, they will contact you at an early date.

Sincerely yours,

Frank E. Johnson (for)

Acting Director

JWAlt/er 3/23/59
Copy to: Docket
Dir Read File
Op. Committee
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Region III (2)
Chron.

43683

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

March 18, 1959

Re: OME 6015; Lead and Copper
Glen Larsen
Iron Blossom Mine
Juab County, Utah

Memorandum

To: W. R. Griswold, Office of Mineral Exploration

From: Commodity Specialist, Branch of Base Metals

Subject: Review of application

The proposed project is essentially the same as the one submitted by Mr. Larsen under docket DMEA 5004.

However, since his last application Mr. Larsen has "encountered on the 300-level a small body of ore adjacent to a caved raise". He notes it does not extend above the 300-level but wishes to winze and crosscut to an undefined point of projected intersection on the 400-level.

It is not clear where this discovery is relative to the workings, nor yet what evidence he has to indicate the liklihood of an intersection on the 400-foot level.

I recommend field referral now that the property is accessible so that the merits of the application can be determined.

O. M. Bishop

O. M. Bishop

cc: Division of Minerals
Mr. Kiilsgaard
Mr. Lamb
Mr. Bishop
F I L E S

OFFICIAL FILE COPY
O. M. E.
RECEIVED MAR 19 1959

DATE	INITIALS	CODE
3-19	C	220
3-19	arb	500

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

OFFICIAL FILE COPY
O. M. E.
RECEIVED MAR 9 1959

DATE	INITIALS	CODE
3-9	C	220
3/10	AH.	500

March 6, 1959

Re: OME 6015
Glen Larsen
Iron Blossom Mine
Juab County, Utah
Appl. Est. $25,936.64
Lead-Copper

Memorandum

To: W. R. Griswold, Office of Minerals Exploration

From: N. E. Nelson, U. S. Geological Survey

Subject: Review of application

This application for assistance is essentially a restatement of the request made under DMEA 5004 which, as recommended by the Field Team, was denied. In the previous application, assistance on a $54,564.11 work program was requested. The examiners recommended a modified project, the estimated cost of which was $30,626.44.

The applicant has done some work on the 300 level in the meantime and, apparently has opened up the top of a shoot of ore which he expects to extend to the 4th level. As the ore shoot is not spotted on the 8-4 map, it is not possible to place it on the longitudinal sections furnished with application 5004, and an estimate of its limitations by old openings cannot be made.

Otherwise the picture has not been changed and the comment, quoted below, of the Field Team concerning the previous application continues valid.

"Although the proposed work might result in the discovery of ore grade material along the east and west (main) fissures and along the rhyolite-dolomite contact we feel that there is insufficient virgin ground remaining in the project area to justify DMEA participation. We view the proposed work as a "clean-up" operation and not exploration for new or undiscovered ore deposits. Accordingly, we recommend denial of this application for exploration assistance."

Denial of this application is recommended.

N. E. Nelson

N. E. Nelson

March 3, 1959

Mr. Glen Larsen
Eureka, Utah

Subject: OME-6015

Dear Mr. Larsen:

Your application for exploration assistance, dated February 20, 1959 submitted to our office at Denver, Colorado has been assigned Docket Number OME-6015 and referred to the Base Metals Division in the Washington Office. Kindly identify all future correspondence relating to your application by this Docket Number.

Sincerely yours,

Allen S. Dakan, Chief
Operations Control and
Statistics Division

cy region III

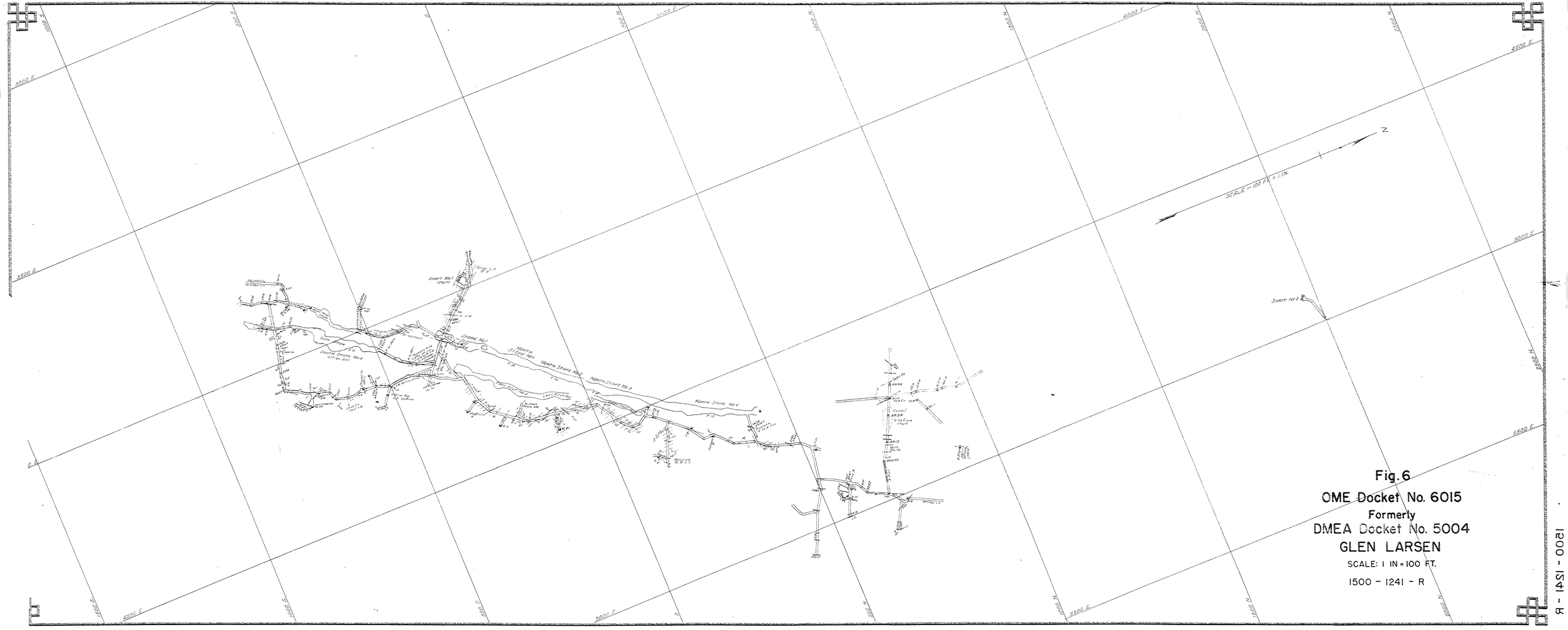


Fig. 6

OME Docket No. 6015

Formerly

DMEA Docket No. 5004

GLEN LARSEN

SCALE: 1 IN = 100 FT.

1500 - 1241 - R

R - 1241 - 1500

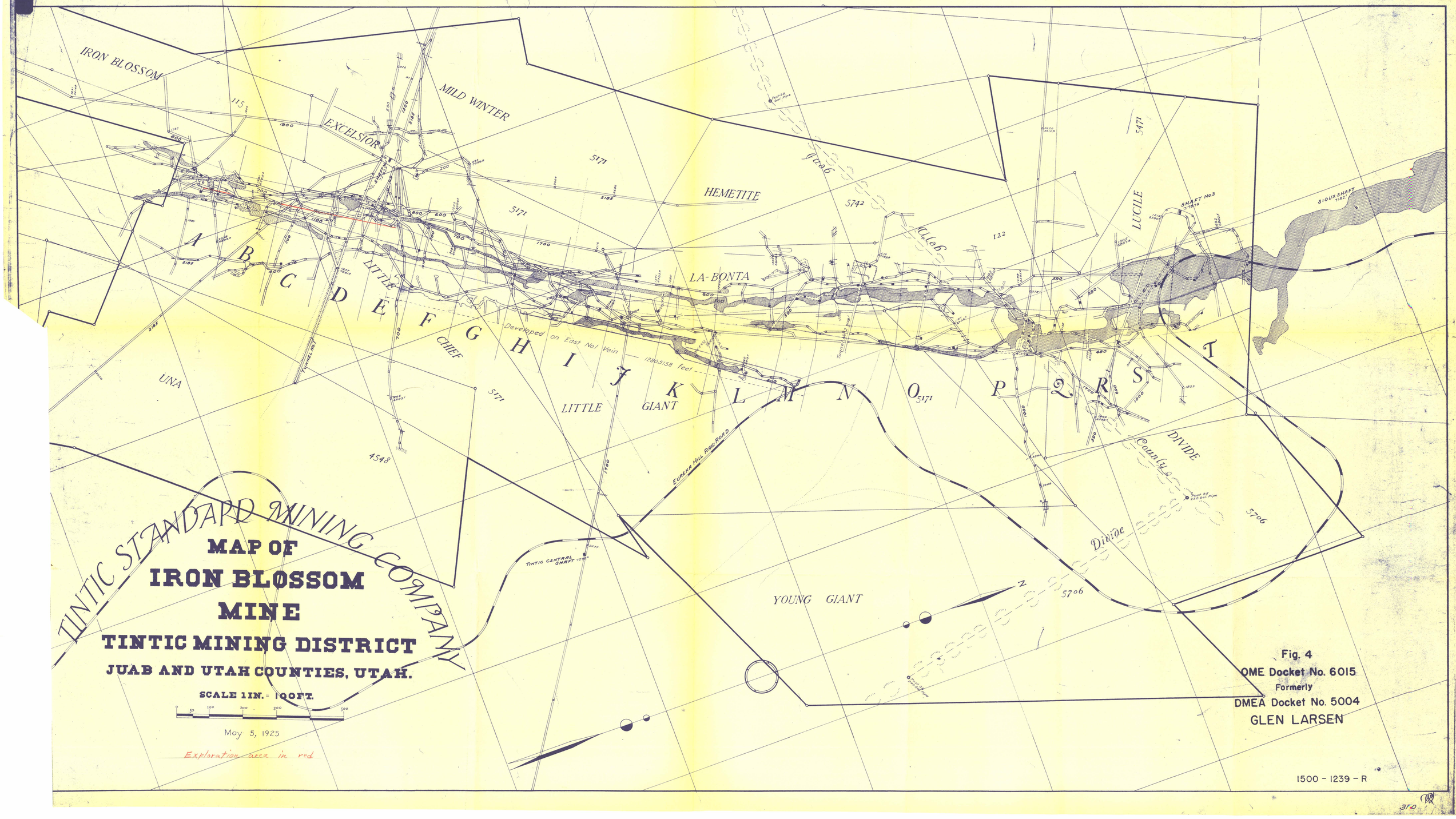
IRON BLOSSOM MINE
400 LEVEL NO 1

332

Fig. 5
OME Docket No. 6015
Formerly
DMEA Docket No. 5004
GLEN LARSEN
SCALE: 1 IN.= 100 FT.

1500 - 1240 - R

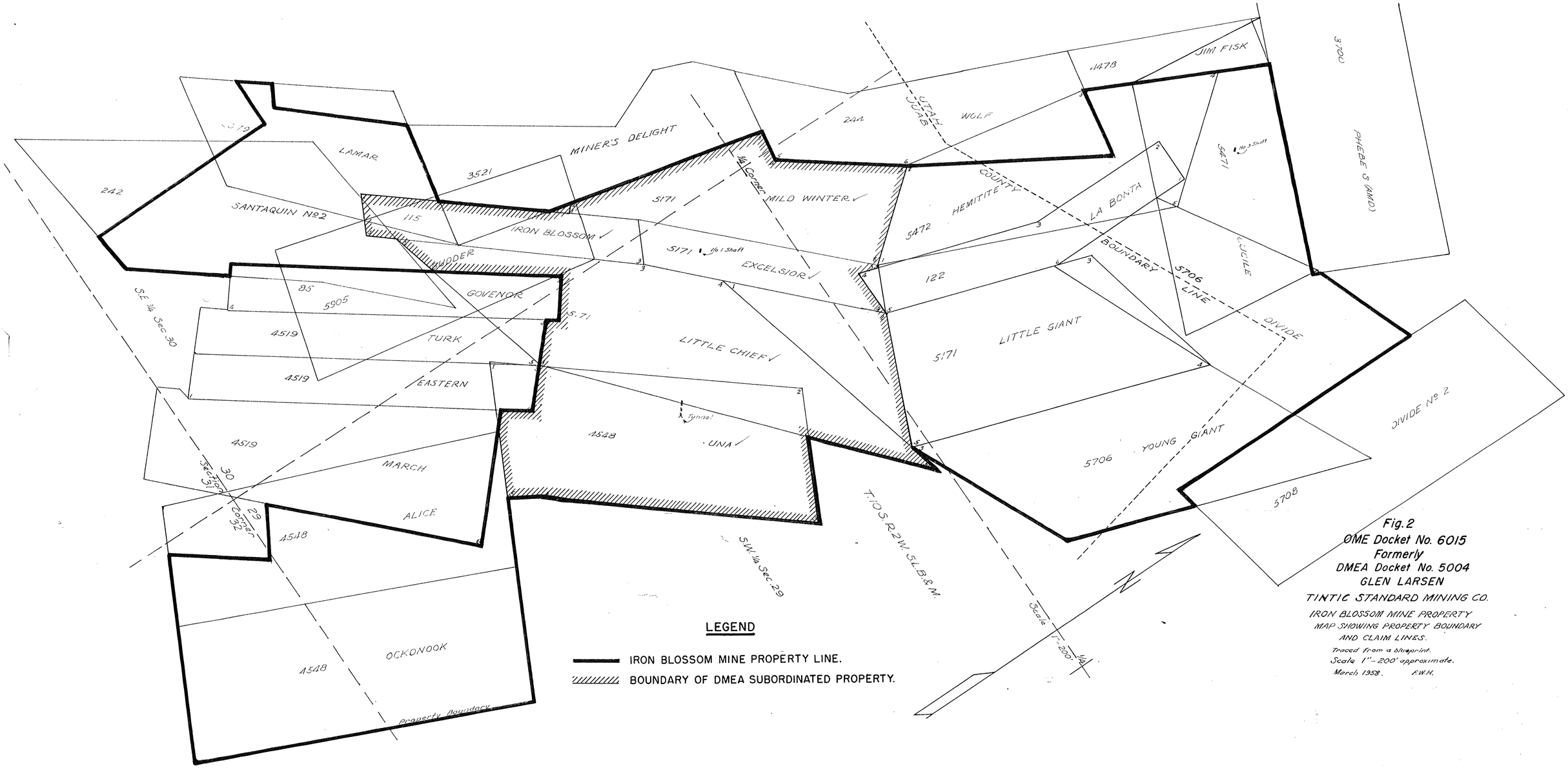
IRON BLOSSOM MINE
200 LEVEL NO.1


TINTIC STANDARD MINING COMPANY
MAP OF
IRON BLOSSOM
MINE
TINTIC MINING DISTRICT
JUAB AND UTAH COUNTIES, UTAH.
SCALE 1 IN. = 100 FT.
May 5, 1925
Exploration area in red
IRON BLOSSOM
EXCELSIOR
MILD WINTER
HEMETITE
LA-BONTA
LITTLE CHIEF
UNA
LITTLE GIANT
YOUNG GIANT
LUCILE
SIOUX SHAFT
SHAFT No 3
Gray Gulch
Developed on East Nol Vein
1280-3158 Feet
Eureka Hill Rail Road
Tintic Central Shaft
Tunnel No 1
County Divide
DIVIDE
A B C D E F G H I J K L M N O P Q R S T
Fig. 4
OME Docket No. 6015
Formerly
DMEA Docket No. 5004
GLEN LARSEN
1500 - 1239 - R

After company map

Revised, May 1959
F.B. Moore, May 1958

FIGURE 3 - COMPOSITE PLAN OF PARTS OF THE 200, 300, AND 400 LEVELS SHOWING RECOMMENDED EXPLORATION, IRON BLOSSOM NO.1 MINE, JUAB COUNTY, UTAH.



LEGEND

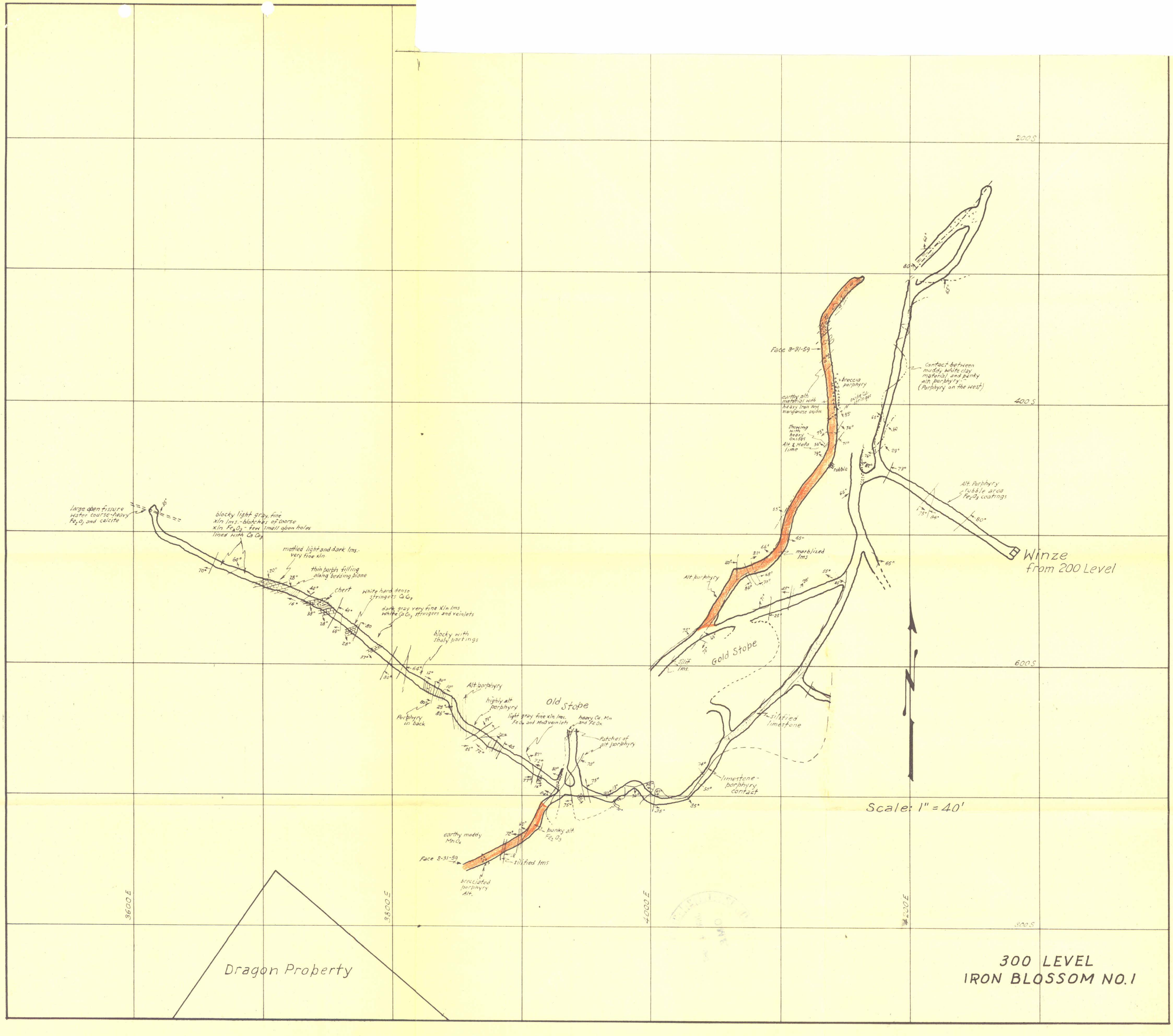
IRON BLOSSOM MINE PROPERTY LINE.

BOUNDARY OF DMEA SUBORDINATED PROPERTY.

Fig. 2
OME Docket No. 6015
Formerly
DMEA Docket No. 5004
GLEN LARSEN
TINTIC STANDARD MINING CO.
IRON BLOSSOM MINE PROPERTY
MAP SHOWING PROPERTY BOUNDARY
AND CLAIM LINES.
Traced from a blueprint.
Scale 1" - 200' approximate.
March 1958. F.W.H.

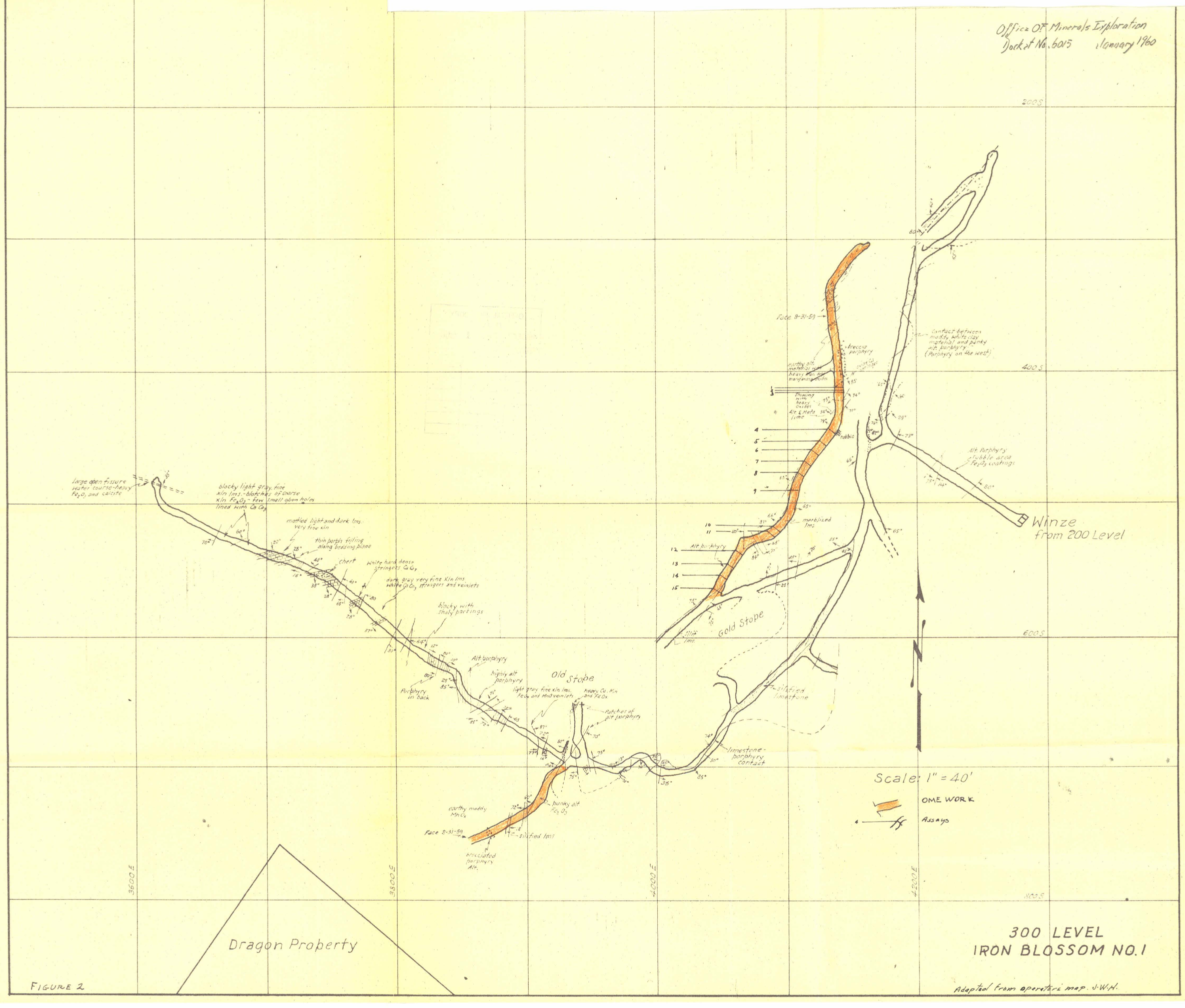
1500 - 1237 - B

8-2


200 S
400 S
600 S
800 S
3600 E
3800 E
4000 E
4200 E
Face 8-31-59
breccia porphyry
earthy alt. material with heavy iron ing manganese oxides
Showing with heavy oxides
Alt & Meta lime
rubble
contact between muddy, white clay material and punky alt. porphyry (Porphyry on the west)
Alt. Porphyry rubble area Fe_2O_3 coatings
Winze from 200 Level
marblized lms
Alt porphyry
silt lms.
Gold Stope
silicified limestone
limestone-porphyry contact
large open fissure water course-heavy Fe_2O_3 and calcite
blocky light gray, fine xln lms.-blotches of coarse xln Fe_2O_3 - few small open holes lined with $CaCO_3$
mottled light and dark lms.-very fine xln
thin porph filling along bedding plane
chert
White hard dense stringers $CaCO_3$
dark gray very fine xln lms. white $CaCO_3$ stringers and veinlets
blocky with shaly partings
Alt porphyry
highly alt porphyry
Porphyry in back
Old Stope
light gray fine xln lms. FeO_x and MnO veinlets
heavy Cu, Mn and FeO_x
Patches of alt porphyry
earthy muddy MnO_x
punky alt. Fe_2O_3
Face 8-31-59
silicified lms
brecciated porphyry Alt.
Scale: 1" = 40'
Dragon Property
300 LEVEL
IRON BLOSSOM NO. 1

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

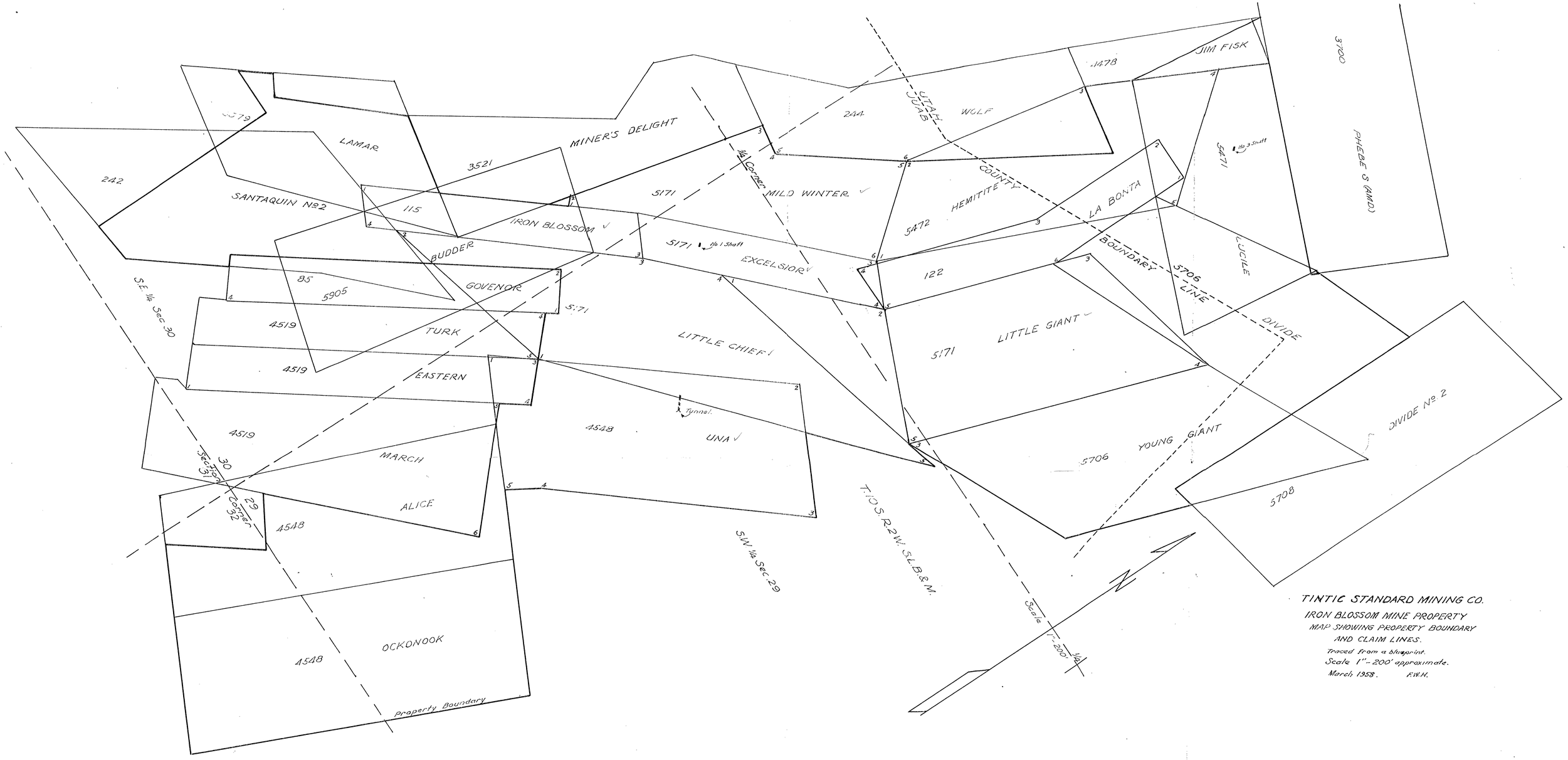
Office of Minerals Exploration
Docket No. 6015 January 1960



300 LEVEL
IRON BLOSSOM NO. 1

FIGURE 2

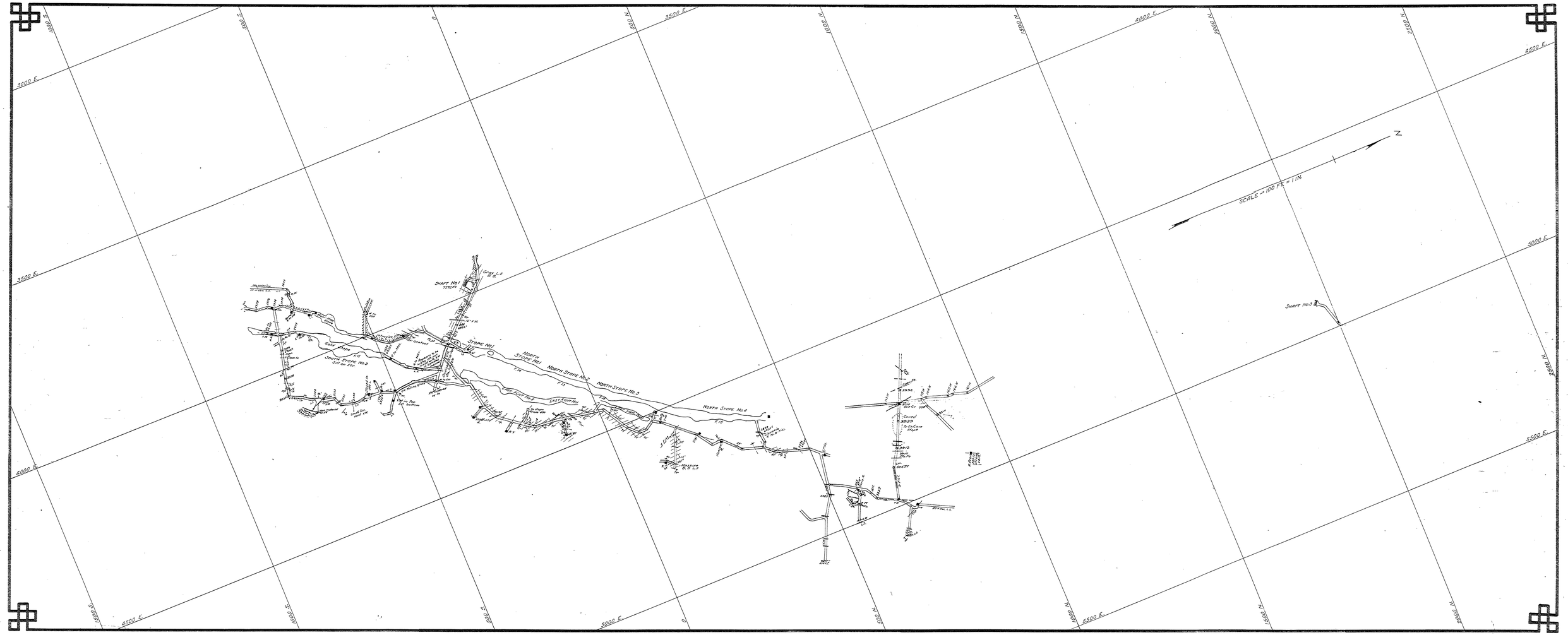
Adapted from operator's map. J.W.H.



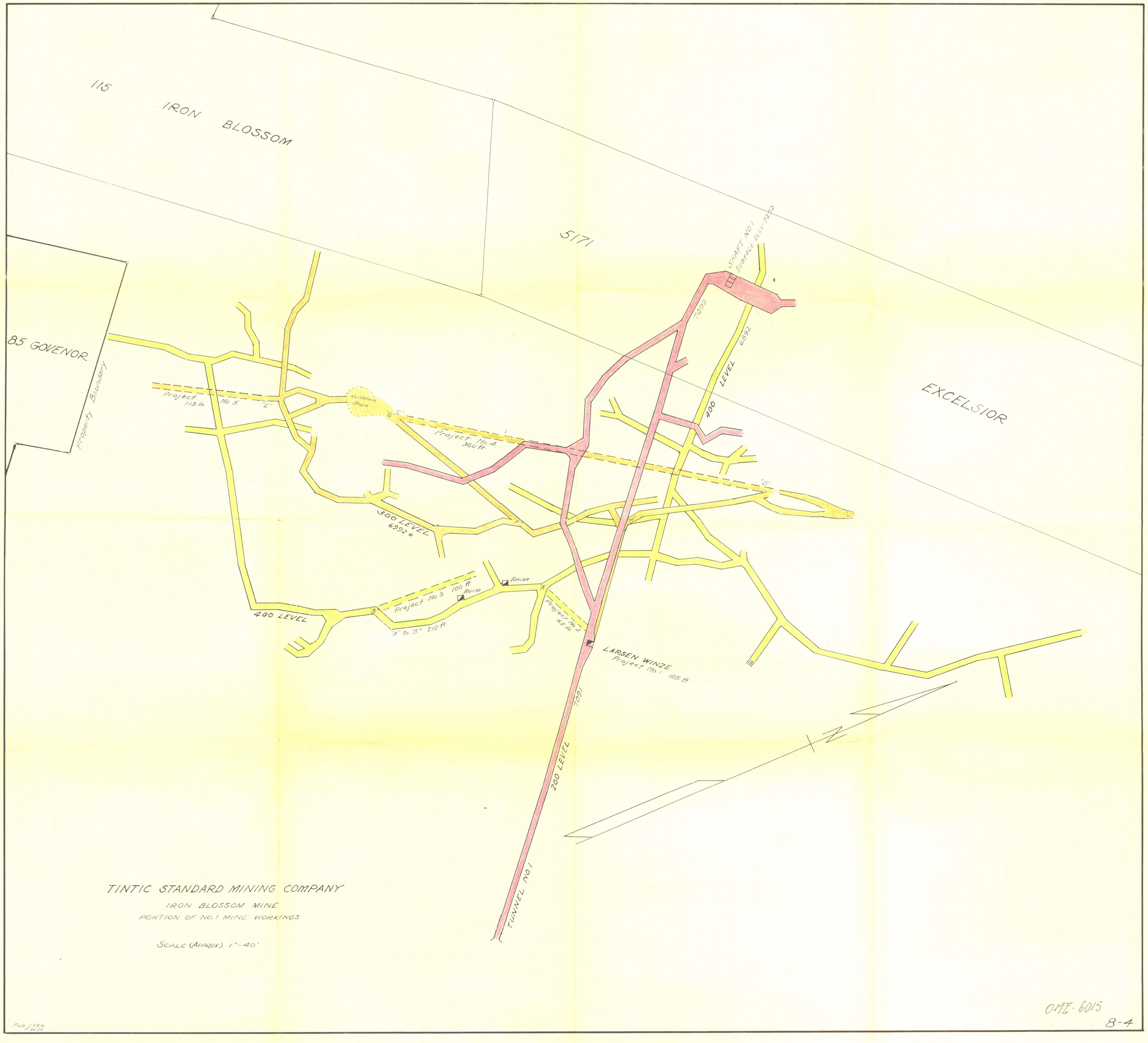
TINTIC STANDARD MINING CO.
IRON BLOSSOM MINE PROPERTY
MAP SHOWING PROPERTY BOUNDARY
AND CLAIM LINES.
Traced from a blueprint.
Scale 1" - 200' approximate.
March, 1958. F.W.H.

IRON BLOSSOM MINE
200 LEVEL NO.1

332



IRON BLOSSOM MINE
400 LEVEL NO.1



TINTIC STANDARD MINING COMPANY

IRON BLOSSOM MINE

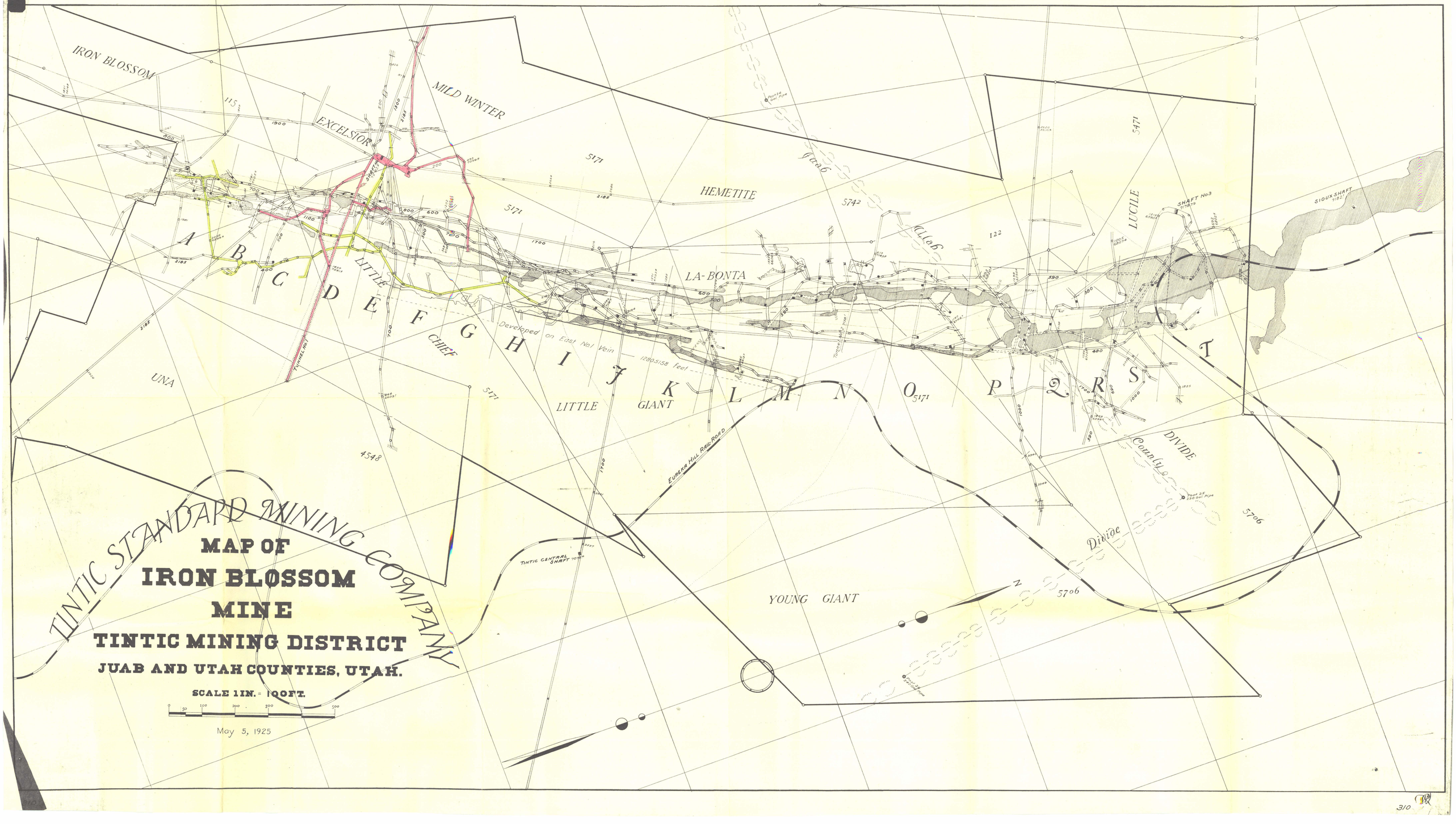
PORTION OF NO. 1 MINE WORKINGS

SCALE (APPROX) 1" = 40'

Feb 1959
F.W.H.

OME-6015

8-4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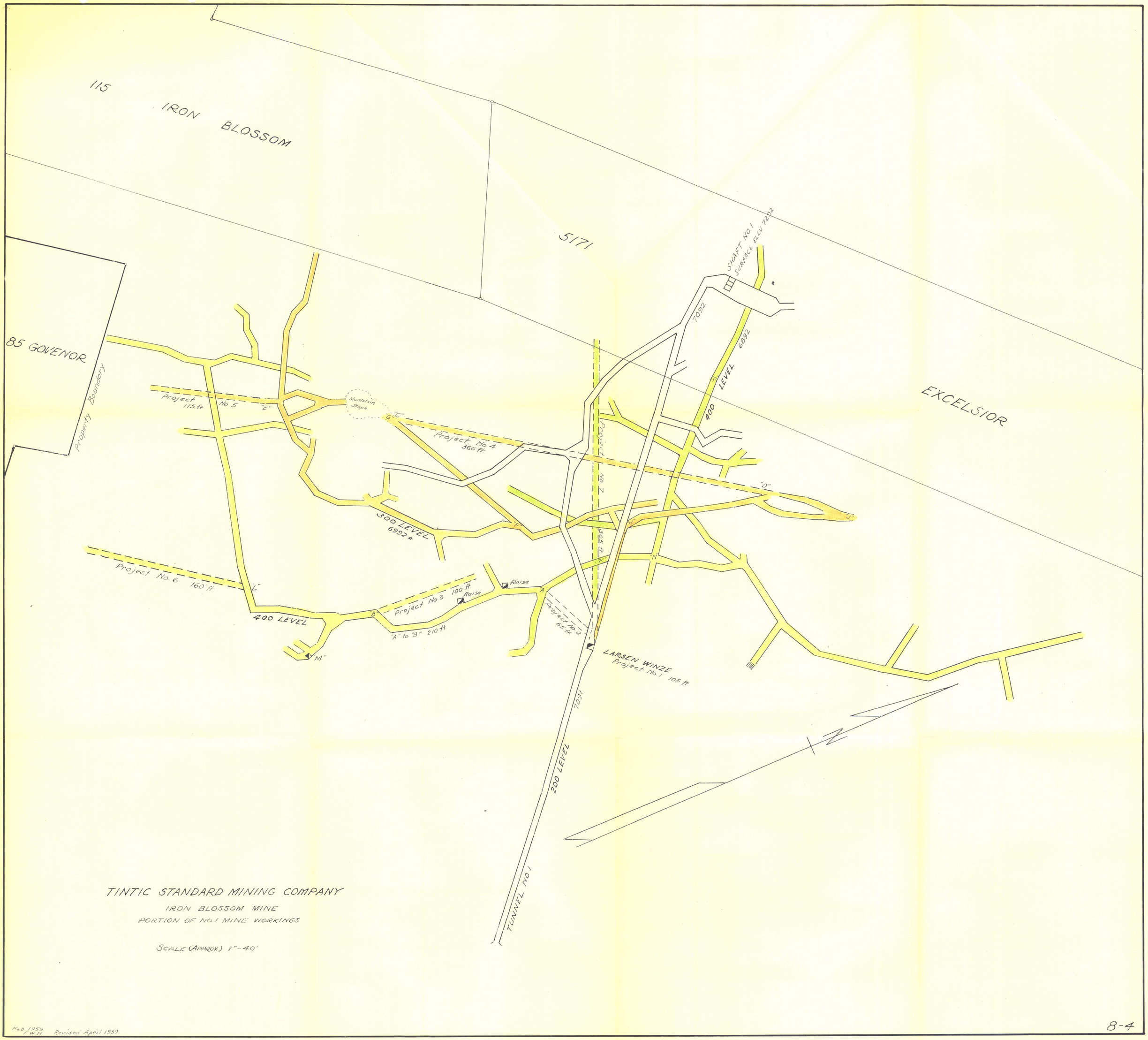
IRON BLOSSOM
MILD WINTER
EXCELSIOR
HEMETITE
LA-BONTA
LITTLE CHIEF
LITTLE GIANT
YOUNG GIANT
UNA
LUCILE
DIVIDE
Divide County
Developed on East No.1 Vein — 1280.5158 feet
EUREKA HILL RAILROAD
TINTIC CENTRAL SHAFT
SHAFT No 3
SIOUX SHAFT
TUNNEL No 1
A B C D E F G H I J K L M N O P Q R S T
5171
5742
5471
122
4548
5706



TINTIC STANDARD MINING COMPANY

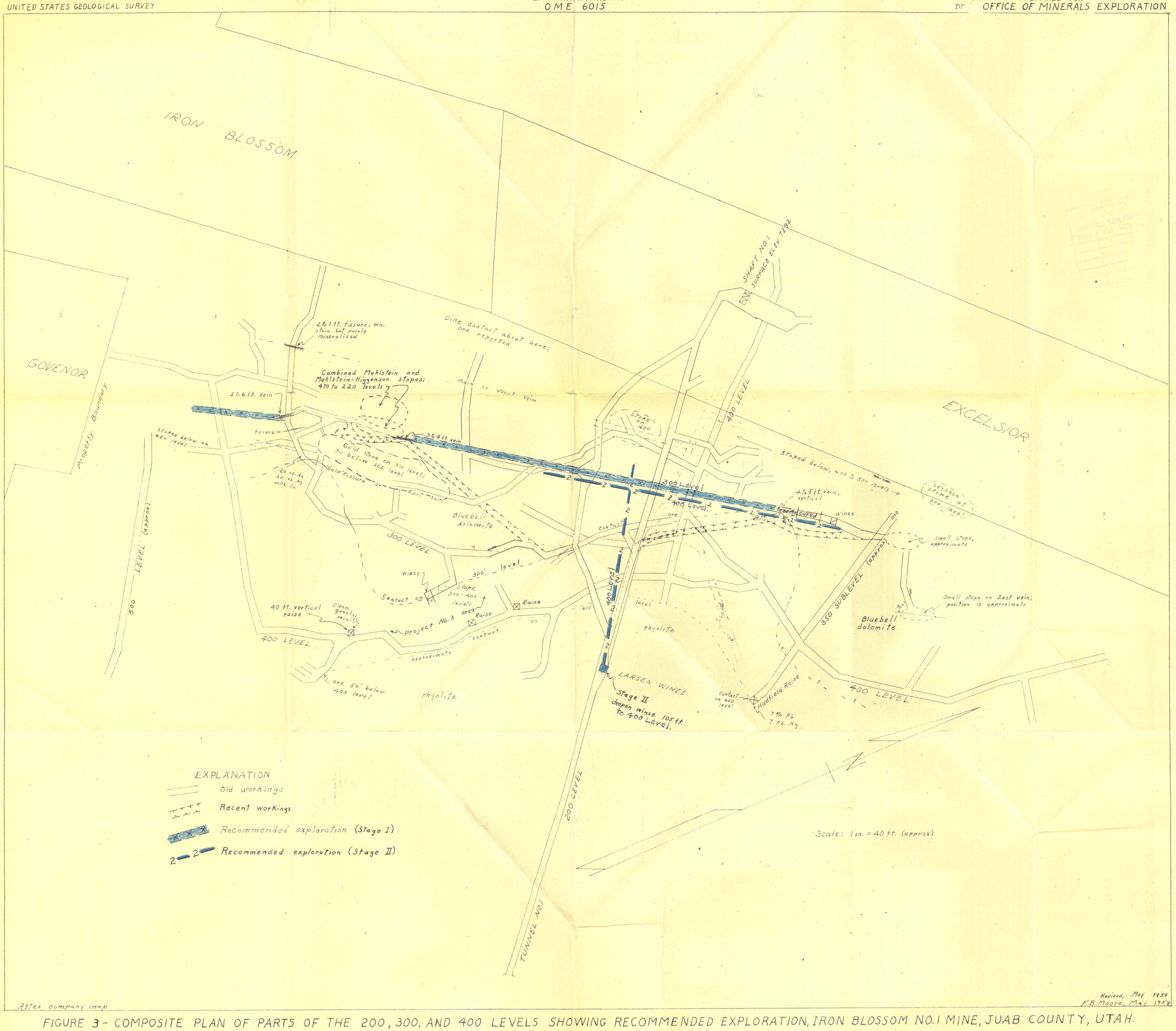
IRON BLOSSOM MINE

PORTION OF NO. 1 MINE WORKINGS

SCALE (APPROX) 1"-40'

Feb 1959 FWH Revised April 1959.

8-4



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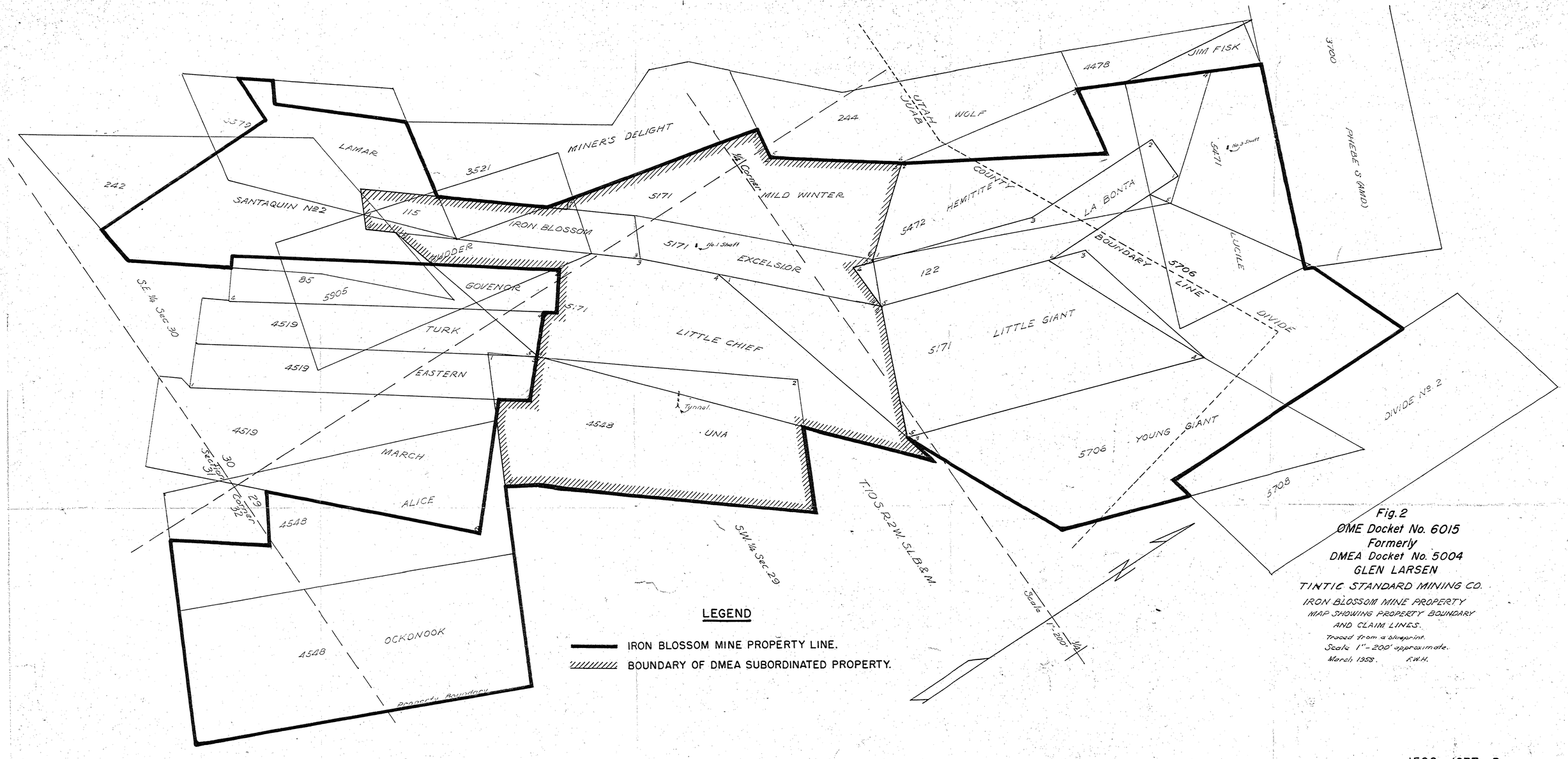

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IRON BLOSSOM MINE PROPERTY LINE.

BOUNDARY OF DMEA SUBORDINATED PROPERTY.

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ØME Docket No. 6015
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